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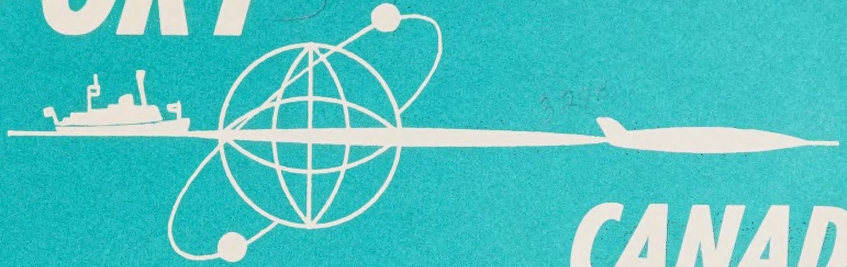




# TRANSPORT

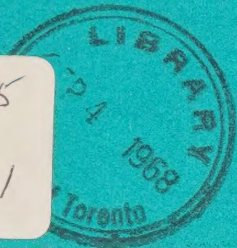
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# CANADA

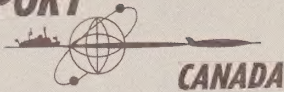
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## COVER

Captain Paul Fournier, master of the Canadian Coast Guard Ship *John A. Macdonald*, stands beside the ship he commanded during what became known as the "epic voyage" last fall. (See story page 5).

(Photo by Deni Eagland, Vancouver Sun)

## FRONTISPICE

Le capitaine Paul Fournier est photographié ici auprès du n.g.c.c. *John A. Macdonald* qu'il a commandé dans un périlleux voyage qui a conduit le navire jusqu'au cœur de l'océan Arctique, l'automne dernier. (Voir article en page 7.)

(Photo de Deni Eagland—Vancouver Sun)

## Editor

Bryan R. Goodyer

## Rédacteur français

Edouard Deslauriers

TRANSPORT is a staff magazine published by the Information Services Division of the Department of Transport, Government of Canada, under the authority of the Minister, Hon. Paul T. Hellyer.

«TRANSPORT» est la revue des employés du ministère des Transports, Gouvernement du Canada, publiée avec l'autorisation du ministre, l'honorable Paul T. Hellyer, par la division des services d'information.

## our new name

As you've probably noticed, we've changed our name.

We didn't do it lightly or on the spur of the moment, but only after considerable soul-searching motivated by two considerations:

First, our editorial policy is to make the Department of Transport staff magazine bilingual in keeping with government policy. "News on the DOT" and "The DOT" simply did not lend themselves to this policy.

Second, we wanted the magazine's name to be as closely descriptive of the department's role as humanly possible.

Happily, the world TRANSPORT fits both these requirements admirably.

In addition, we've included the artwork carried on all our press releases and ministerial speeches which combines our air, marine and communications activities.

As will be seen by the Deputy Minister's message on page 3, D.O.T. is in search of an insignia which will symbolize the department.

We don't have all the details yet, but the competition will definitely be limited to departmental employees. And in all likelihood, the winner will receive an award. So it's not too early to begin some creative doodling!

In any case, we hope you'll like the changes we've made and agree that our new name does represent an improvement.

We also hope that what you will find under the new name continues to be worthy of the enviable reputation that your staff magazine has won, both within and outside the departmental family, as the voice of TRANSPORT.

## notre revue change de nom

Vous avez sans doute remarqué que nous avons changé le titre de la revue. Nous ne l'avons pas fait à la légère ou par intuition soudaine, mais seulement à la suite d'une longue réflexion, en considérant deux exigences.

Premièrement, nous voulons, conformément à la ligne de conduite du gouvernement, rendre bilingue le magazine des fonctionnaires du ministère des Transports. Les titres «News on the DOT» et «The DOT» ne se prêtaient pas à la réalisation de cet objectif.

En second lieu, nous voulions que le titre du magazine décrive aussi bien que possible le rôle du Ministère. Heureusement, le mot TRANSPORT satisfait admirablement à ces deux exigences. Sa signification est la même dans les deux langues et il semble que ce soit le seul mot qui décrive le mieux la portée générale de nos intérêts et de nos responsabilités.

Nous avons, de plus, tenté d'inclure dans le titre le dessin qui figure sur tous nos communiqués et sur la page frontispice de tous les discours du Ministre. Ce dessin représente nos activités en matière de transport aérien et maritime, et de communications.

Comme l'indique le sous-ministre dans son message (en page 3), nous sommes également en quête d'un nouveau symbole ou insigne pour illustrer le travail qu'accomplit le ministère des Transports. Il s'agira vraisemblablement d'un concours s'adressant particulièrement aux employés. Un prix sera sans doute offert à l'employé dont la suggestion aura été acceptée. Une invitation donc à ceux qui se sentent inspirés... Il n'est pas trop tôt pour se mettre à la tâche.

A tout événement, nous espérons que notre nouveau titre vous plaira et que vous conviendrez avec nous qu'il constitue une amélioration.

Nous espérons également que vous continuerez à trouver la présente publication digne de la réputation que s'est méritée votre magazine, en tant que voix du TRANSPORT, à l'intérieur comme à l'extérieur du Ministère.





## **a new symbol**

I think it is high time that we had a symbol or insignia which represents the Department of Transport and which will be an indication of our activities and our purpose, both to the general public and to all members of the Department. Further, I think that everyone in the Department who wishes should have a chance to put forward suggestions in this connection.

A small headquarters group will be established to plan and decide how best this can be done and further details will be carried in the next or second issue of "Transport."

## **un nouveau symbole nécessaire**

Il est grand temps, je crois, que nous ayons un symbole ou un insigne qui représente le ministère des Transports et qui soit un indice de nos activités et de notre but, tant aux yeux du public en général qu'à ceux de tous les membres du Ministère. Je pense, de plus, que tout employé qui le désire, au Ministère, devrait avoir l'occasion de présenter des suggestions à cet égard.

Nous établirons un petit groupe, à l'administration centrale, en vue de préparer ce projet et de décider de la meilleure manière de le réaliser. Le prochain numéro de «Transport», ou celui qui le suivra, vous présentera de plus amples renseignements à ce sujet.

*Deputy Minister*

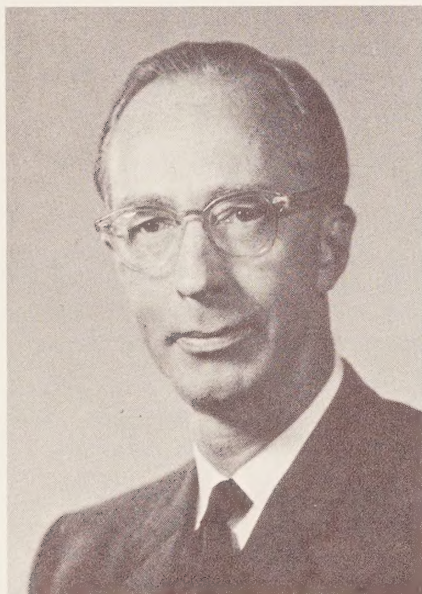
*Sous-ministre*



# the press and the government

by Gordon W. Stead  
Assistant Deputy Minister  
Marine Services  
Department of Transport

*Recently, Mr. Stead, known to newsmen who have called our Information Services Division requesting interviews as a man whose door is always open, was asked to write a guest column for the annual edition of Canadian Shipping and Marine Engineering News devoted to Department of Transport activities. In the belief that what Mr. Stead had to say is important to all of us, his remarks are re-printed below.*



Webster defines an editorial as "... an expression of the views ... of the person ... in control of the paper." Heady stuff, indeed, for one of the anonymous bureaucracy! Dare one, not of the fourth estate, wield the awesome power of the press?

Editorials customarily comment on the deeds or misdeeds, or even nondeeds, of somebody responsible for a function in our society. As things are, this body is often government, although business and labor also get their share of advice.

This time, let us consider the press itself and its relation with government officials. Nor need this be a trespass upon the hospitality of this column, but rather the natural consequence of another point of view in momentary "control" of this journal.

It should never cease to amaze the rest of us that people trained as writers—but not in the substance of the varied matters they must write about—get as many news stories as straight as they do. With reporters who have had a chance to specialize and, to the extent that they check their stories with someone who knows the facts, reliability is high. It is not always so; and when it is not, the press can hardly claim to fulfil its rightful role as essential informant to democratic opinion. Rather, democracy becomes confused and uncertain.

Most civil servants with any degree of responsibility are in the business to try to make democracy work. The role of the press is to discover and inform, so that the judgments of democratic society may be soundly based. Public servants and the press are thus equally committed. The press does little public service when it portrays conscientious public servants as buffoons.

Times change—and, of recent years, perhaps more rapidly in the federal service than in many other fields. The merit system has been in effective operation for

years. A whole new generation—the nonsense wartime crop—has risen to seniority. They do not conceive their jobs as dependent on secrecy or artifice. They expect to operate in a goldfish bowl. They welcome comment and criticism, provided only that it is informed and relevant. Indeed, without the support of an interested and informed public they can do little; and they keenly understand this.

What has happened to the traditional distinction between news and comment? It is hard to find a news story nowadays that is free from opinion. Is this really the job of the reporter whose aim should be to inform? From an editorial writer opinion and contention are expected—but from a news writer?

Of course, government departments are not without fault. They try to select items of genuine interest for release to the press, but they may favor things in which the department can feel some pride. There is little harm in this if releases are used by the press the way they should be. They can only serve as snippets of information to keep the public up to date. They can never substitute for the well-rounded news story dug out by a reporter's effort.

As long as the press relies entirely on departmental releases and fails to invade the offices of senior public servants to ferret out news, published stories will lack depth. In the marine field, happily, the situation has improved tremendously in recent months as senior newsmen have really tried to find out where things stand. May this interchange continue!

Public business should be as public as possible, subject only to the essential right of government, as of anyone else, to negotiate and to contemplate in private. Facts should be open and there is no excuse for the press not getting them straight.

Our phones are there for all to use.

# It was all in a day's work for the John A. Macdonald

The long journey that was called "an epic voyage" has ended where it began and CCGS *John A. Macdonald* is back on the job patrolling the frigid waters of the Gulf of St. Lawrence.

But for Captain Paul Fournier and the 90 members of the *John A.*'s crew, the trip that started out as a routine re-supply mission in the Eastern Arctic, unexpectedly took them through the Northwest Passage, through a dramatic rescue deep in the polar ice and finally to a hero's welcome on the west coast

before they returned home to Dartmouth via the Panama Canal, was one they will never forget.

It all began quietly enough last July 4 when the fully-provisioned icebreaker, third largest in the world, slipped out of Montreal harbour for what its crew expected to be a routine three-month round of surveying, loading and unloading cargo and aiding in the annual Department of Transport re-supply operation.

She was busy at this work when a call came through on Sept. 5 asking for assistance.

The Victoria-based icebreaker *Camsell* was working in the Beaufort Sea, 1,500 miles to the west and couldn't answer all the calls for help from trading vessels being hemmed in by heavy ice floes moving close to the mainland.

So the *John A.* crossed the famous stretch of Arctic water and, in doing it, became the first ship to sail the Northwest Passage through Victoria Strait







A proud Captain Paul Fournier shows Transport Minister Paul Hellyer around CCGS John A. Macdonald after the ship arrived for a hero's welcome in Vancouver.

Le capitaine Paul Fournier guide le ministre Paul Hellyer dans une visite du n.g.c.c. «John A. Macdonald» peu après l'arrivée du navire à Vancouver.

since Sergeant Henry Larsen did it in the *St. Roch* 25 years ago.

Three weeks later, a call for help came from further west. The United States Coast Guard Cutter *Northwind* was stranded deep in polar ice approximately 500 miles north of the Alaska coast.

And so what looked to be an impossible struggle against the forces of nature was begun as the 6,186-ton *John A. Macdonald*, in company with the USCGC *Staten Island*, began to batter her way through the heavy ice toward the stricken U.S. ship.

With high winds and what seemed to be progress at a snail's pace, the ships inched toward the disabled *Northwind*.

Recalls a member of the *John A.*'s crew: "The ice was so thick at times that we couldn't move an inch and it looked like the rescue might have to be abandoned and the American ship left there for the winter."

Rescue, however, came with dramatic suddenness when a shift in the wind allowed the three ships to open up the last stretch of ice that separated them

and then turn about for the long journey south.

For the *John A.*, the only way home after the ships reached open water was through the Bering Strait, down the Pacific Coast, through the Panama Canal and home to Dartmouth via the West Indies and New York.

Her chance to redouble her triumph by making the return trip across the Arctic was lost when the passage to the east froze while the big icebreaker was churning her way toward the *Northwind*.

"Canadian Icebreaker Completes Northwest Passage Trip," declared a Quebec newspaper; "Icebreaker to get hero's welcome in B.C.," reported all three Toronto papers; and "Hero's Welcome Awaits 'Breaker in Vancouver," said banner headlines in British Columbia's dailies.

First to go aboard the ship when it docked in Vancouver was Transport Minister Paul Hellyer who warmly congratulated Capt. Fournier and his men with the words: "We Canadians are proud of you, both for your trip and

for the aid you gave to the disabled ship *Northwind*."

In Seattle, the ship was given a civic reception and Captain Fournier was presented with a citation which read in part:

"The Commandant of the United States Coast Guard takes pleasure in commending the Canadian Coast Guard Ship *John A. Macdonald* for service as set forth in the following citation:

"For exceptionally meritorious service during the period 23 September to 8 October 1967 while under the operational control of the U.S. Coast Guard and engaged in the perilous task of rendering assistance to the damaged USCGC *Northwind* which was in imminent danger of being icebound for the long Arctic winter at Latitude 79 degrees, two minutes North, Longitude 168 degrees, six minutes West.

"The operation required the utmost in ice seamanship, skillful manoeuvring of the vessel and outstanding teamwork from the entire crew of the *Macdonald* which resulted in *Northwind* clearing the ice on 8 October.

"The courageous action, initiative, diligence and perseverance of the personnel on board the *Macdonald* during this hazardous operation were in keeping with the finest traditions of the United States Coast Guard."

The citation was signed "P. E. Trimble, Vice Admiral, Acting Commandant, U.S. Coast Guard."

In accepting the award, Capt. Fournier said that while he was honored, he felt obliged to point out that the *John A. Macdonald* was merely returning favors done many times by the U.S. Coast Guard and added: "We're paid to do this job. We try to do our best."

The fact that the *John A.* had done her best was reflected in a letter received by Transport Minister Hellyer from Alan S. Boyd, Secretary of the United States Department of Transportation, who said, in thanking the Department for its help: "I look forward toward continuing the excellent relationship between our polar fleets and in all of our areas of mutual interest."

Commenting editorially on the ship's busy summer, the *Montreal Gazette* said:

"The Arctic has truly been conquered when a ship's master can say the Northwest Passage is all in a summer's work.

"The ghosts of a thousand mariners who tried to find the passage without success must have watched the *John A. Macdonald* smash her way through."

# Un voyage de routine devient une aventure mémorable

Le long trajet qu'on a appelé «un voyage épique» s'est terminé là où il avait commencé, et le n.g.c.c. *John A. Macdonald*, de retour, patrouille de nouveau les eaux glacées du golfe Saint-Laurent.

Mais, pour le capitaine Paul Fournier et les 90 membres de l'équipage du *John A.*, ce voyage qui, à ses débuts, devait être une mission de ravitaillement de routine dans l'est de l'Arctique, est devenu une aventure qu'ils n'oublieront jamais. Le *John A. Macdonald* a d'abord inopinément franchi le passage du Nord-Ouest et a par la suite participé à un sauvetage dramatique très loin dans les glaces polaires au sommet du monde. L'exploit a valu aux membres de l'équipage un accueil de héros à Victoria, Vancouver et Seattle avant qu'ils ne rentrent chez eux à Dartmouth en passant par le canal de Panama.

Toute l'affaire a débuté assez calmement le 4 juillet dernier alors que le brise-glace, se glissait hors du port de Montréal pour entreprendre ce que son équipage croyait être une tournée de routine de trois mois à faire de l'hydrographie, à charger et décharger des marchandises et à aider à cette entreprise annuelle du ministère des Transports.

Le 5 septembre, il était occupé à ce travail lorsqu'un appel lui parvint du *Camsell*. Ce brise-glace, qui a sa base à Victoria, était à l'œuvre dans la mer de Beaufort, à 1,500 milles à l'ouest, et ne pouvait répondre à toutes les demandes de secours qui lui arrivaient des navires de commerce qui se faisaient entourer par des masses de glace épaisse se déplaçant à proximité du continent.

Ainsi, le *John A.* s'est dirigé vers cette fameuse étendue des eaux de l'Arctique et, de ce fait, est devenu le premier navire à franchir le passage du Nord-Ouest en passant par le détroit Victoria depuis que le sergent Henry Larsen a accompli cet exploit à bord du Saint-Roch, il y a 25 ans.

Trois semaines plus tard, une demande de secours est parvenu au *John A.* d'un point plus à l'ouest. Le cotre *Northwind* de la Garde côtière des États-Unis était échoué, très loin dans les glaces polaires,

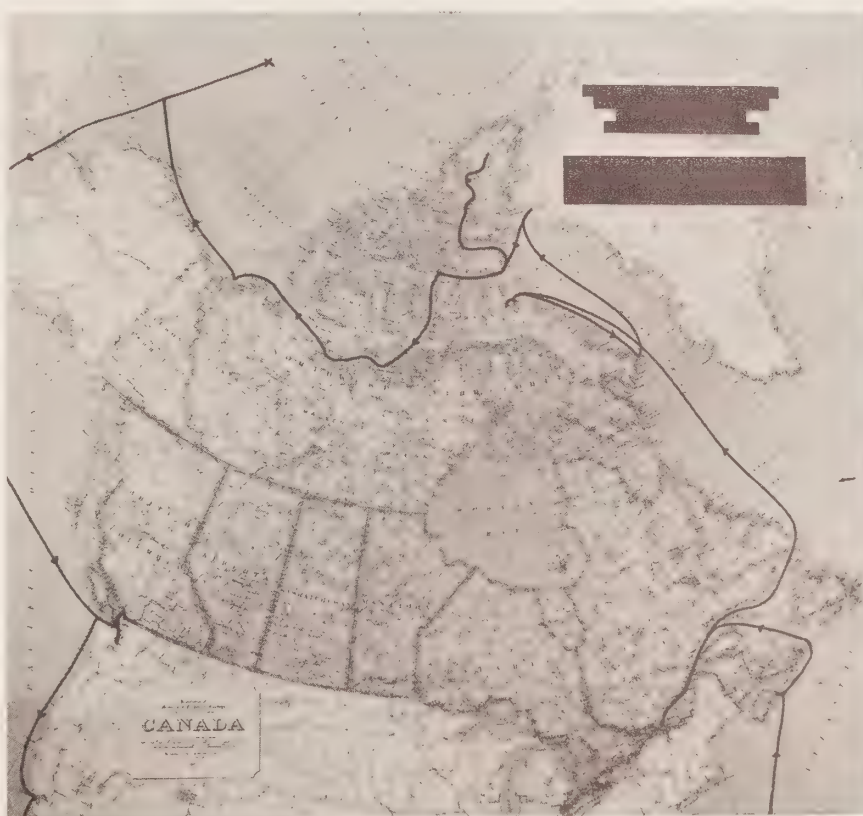
à environ 500 milles au nord de la côte de l'Alaska.

Et ainsi a débuté ce qui semblait être une lutte impossible contre les forces de la nature. Le *John A. Macdonald*, d'une jauge de 6,186 tonneaux, et le cotre *Staten Island* de la Garde côtière des États-Unis ont commencé à se frayer un chemin à travers la glace épaisse vers le navire américain immobilisé. Luttant contre de grands vents, on avançait à pas de tortue en direction du *Northwind* désespéré.

Un membre de l'équipage du *John A.*

décrit la situation en ces termes: «La glace était si épaisse, à certains moments, que nous ne pouvions pas avancer d'un pouce et il semblait qu'il nous faudrait peut-être abandonner la partie et laisser le navire américain passer l'hiver à l'endroit où il se trouvait.»

Cependant, le sauvetage s'est fait avec une rapidité dramatique lorsqu'un changement de vent a permis aux navires d'ouvrir un chenal à travers la dernière étendue de glaces qui les séparait et de faire demi-tour pour entreprendre le long trajet vers le sud.



Map shows operations of CCGS John A. Macdonald showing its Northwest Passage route and the course it took in company with the United States Coast Guard Cutter Staten Island through the polar ice pack to aid the stricken USCGC Northwind.

Cette carte indique le parcours suivi par le n.g.c.c. «John A. Macdonald» qui a franchi le Passage du Nord-Ouest et a filé vers l'océan Arctique pour se porter au secours du «Northwind», navire de la Garde côtière américaine, lequel était en panne dans les glaces polaires.



Pour le *John A.*, le seul moyen de rentrer à Dartmouth après le sauvetage était de traverser le détroit de Béring, de longer la côte du Pacifique, de franchir le canal de Panama puis de passer par les Antilles et par New York.

L'occasion de doubler son triomphe en faisant son voyage de retour à travers l'Arctique a échappé au gros brise-glace. Tandis qu'il se frayait un chemin vers le *Northwind*, le passage vers l'est lui a été bloqué par les glaces.

«Un brise-glace canadien franchit le passage du Nord-Ouest», annonçait un journal du Québec; «Un brise-glace sera accueilli en héros en Colombie-Britannique», clamaient les trois journaux de Toronto; et «Un accueil digne d'un héros attend le brise-glace à Vancouver», disaient les manchettes de quotidiens de la Colombie-Britannique.

Le premier à monter à bord du *John A.*, lorsqu'il a accosté à Vancouver fut M. Paul Hellyer, ministre des Transports, qui a chaleureusement félicité le capitaine Fournier et ses hommes en les accueillant par ces mots: «Nous, Canadiens, sommes fiers de vous, tant à cause de votre voyage qu'à cause de l'aide que vous avez apportée au navire désemparé *Northwind*.»

A Seattle, le navire fut l'objet d'une réception civique et on présenta au capitaine Fournier une citation dont voici un extrait:

«Le commandant de la Garde côtière des États-Unis a le plaisir de rendre hommage au navire de la Garde côtière canadienne *John A. Macdonald* pour les services mentionnés dans la citation suivante:

«Pour services exceptionnellement méritoires pendant la période allant du 23 septembre au 8 octobre 1967, alors qu'il servait sous la direction de la Garde côtière des États-Unis et qu'il s'acquittait de la tâche périlleuse de porter secours au cotre avarié *Northwind* de la Garde côtière des États-Unis, qui se trouvait en danger d'être retenu dans les glaces pendant le long hiver de l'arctique à la latitude de 79 degrés, deux minutes nord par la longitude de 168 degrés six minutes ouest.

«Cette opération exigeait au plus haut point la connaissance de la navigation dans les glaces, la manœuvre habile du navire et le travail d'équipe extraordinaire de la part de tout l'équipage du *Macdonald* qui ont permis, le 8 octobre, de libérer des glaces le *Northwind*.

«Le courage, l'initiative, la diligence et la persévérance dont a fait preuve le personnel du *Macdonald* durant cette opération hasardeuse ne le cèdent en rien aux meilleures traditions de la Garde côtière des États-Unis.»

La citation portait la signature de P. E. Trimble, Vice Admiral, Acting Commandant, U.S. Coast Guard.

En acceptant cette récompense, le capitaine Fournier s'est dit honoré mais il a ajouté que le *John A. Macdonald* ne faisait que rendre les services reçus maintes et maintes fois de la Garde côtière des États-Unis et il a conclu: «Nous sommes payés pour faire ce travail. Nous nous efforçons de le faire de notre mieux.»

Au sujet de l'exploit, la *Montreal Gazette* écrivait en page de rédaction:

«L'Arctique a réellement été conquis lorsqu'un capitaine de navire peut dire que la navigation dans le passage du Nord-Ouest fait partie de la routine.»

«Les ombres des milliers de marins qui ont tenté sans succès de découvrir ce passage ont dû regarder attentivement le *John A. Macdonald* y frayant son chemin.»



Transport Minister Hellyer chats with two members of the crew of the *John A. Macdonald* in Vancouver. Jerry Duggan of Bell Island, Nfld., has been with D.O.T. for four years. Hayward Stratton of Valleyfield, Nfld., joined the Canadian Coast Guard in June of 1967 and the operation was his first in the service.

Le ministre Paul Hellyer s'entretient avec deux membres de l'équipage du «*John A. Macdonald*». Jerry Duggan, de Bell Island (T.-N.), est à l'emploi du ministère des Transports depuis quatre ans. Hayward Stratton, de Valleyfield (T.-N.), est au service de la Garde côtière canadienne depuis juin 1967. C'était sa première tournée dans les eaux de l'Arctique.

# weather wonderland



If you've ever wondered why hurricanes are named (for easier identification) or maybe what the temperature is 200 miles up (2,000 degrees F.), then a visit to the meteorological exhibit at the new National Museum of Science and Technology in Ottawa is a "must."

There, among a fascinating variety of exhibits in what Dr. David Baird, the director, calls his "Fun Museum," the visitor can find out for himself a little of the science of meteorology by pushing buttons, breathing into weather instruments or watching instantaneous weather reports flash across a moving screen.

The subject is the world's weather, the way it affects us and the manner in which it is observed and presented—whether as a topic of discussion among friends or a briefing on which a pilot bases his flight plan.

The display also takes a peek at the future with a life-like model of the Essa weather satellite showing its all-seeing cameras which peer down at the earth and photograph the ever-changing

weather patterns and shows how the meteorologists working at ground stations decipher the co-ordinates and draw in national and provincial boundaries to make sense of what the satellite has photographed.

Starting with an invitation from Dr. Baird, the Met. exhibit was put together by Percy Saltzman, one of the Branch's best known boosters, Al Mowat of the weather services section, Pat Connor and Claude Buffett, the two Met. staffers who assembled the equipment, and Charles Taggart of the Meteorological Satellite Data Laboratory who worked on the satellite exhibit.

"The thing that's different about this exhibit and the reason that everyone gets so much out of it," says Mr. Mowat, who spent two weeks in Ottawa helping to get the project launched, "is the fact that visitors press the switches and make the equipment work by themselves."

Mr. Mowat, whose enthusiasm for the project led him to bring along his personal tape recorder to record the official

opening of the museum by Dr. Baird and State Secretary Judy LaMarsh, and interview a few of the hundreds of visitors who went through the exhibit during its first two weeks, says the exhibit was established relatively inexpensively to help make the Meteorological Branch better known to the public as well as to interest young people in meteorological careers.

Proof that the exhibit is accomplishing both objectives is contained on tape as well as on a notebook left at the centre of the exhibit where visitors are encouraged to leave their names and their impressions of the display.

The comments range from the "keen" and the "cool" of the younger generation to "beautiful" (a lady visitor) to "excellent and informative."

"Good to see Met. in action," wrote an Ottawa-based Met. technician; "Above all it is thought-provoking," added a science teacher; and summed up in the words of an elderly gentleman visitor: "It's better than what I've seen at Expo."



## jumbo jets - are we ready?



*This view of Toronto International Airport shows how the three factors of airport planning—people, land vehicles, and air vehicles—are interrelated.*

*Cette vue de l'aéroport international de Toronto nous donne un aperçu des facteurs dont il faut tenir compte dans l'élaboration des plans relatifs à l'aménagement d'un aéroport. Ces facteurs sont le public voyageur, le transport en surface et le type d'avion.*

by William Dunstan  
Information Services Division

There have been some wails of late that, as jumbo jets and supersonic aircraft prepare to whistle down toward Canadian runways, the Department of Transport is whistling a puzzled tune while it wonders whether or not to do anything about it.

The fact that such criticism could not be more wildly untrue is sometimes difficult for a government department to put across.

Plans are well advanced to meet every conceivable requirement of the new air age but, having said that much, our lips are sealed in most circumstances.

No specific plans or proposals, no matter how soundly researched or generally acceptable, are official until they have been approved by the Government and cannot, therefore, be revealed until then.

Yet we can claim, with some validity, that we lead the world in some of our planning for this next great leap forward in aeronautical speed and dimensions.

One of the new concepts that have created enthusiasm among planners is

the "drive-in-gate-check-in" concept. Under this plan, each aircraft has its own gate and passengers drive direct to the gate.

The passenger can see his aircraft from his car. He parks at the site, enters the gate and goes directly to his aircraft. His baggage is checked and goes directly on board, without mingling with other baggage flow.

Arrivals are similar—much like the case of the ship which ties up at a dock where all passenger and baggage services are devoted to that ship.

The first jumbo jet will begin operating into Canada early in the 1970's, the supersonics a few years later.

D.O.T. planning for these events entered a stepped-up phase some 18 months ago with the formation of an aviation systems planning group, under the Civil Aviation Branch, with the immediate objective of planning for the new air age at Toronto and Montreal international airports.

This was not, of course, the birth of planning within D.O.T., which has plan-

ned for and assisted the development of civil aviation since its formation in 1936.

Since the 1950's for example it has spent well over \$100,000,000 in building across Canada a chain of major international airports which are among the finest in the world.

The program still is underway and at Vancouver a new \$23,000,000 air terminal, designed to accommodate expansion for future needs, is scheduled to open early next year.

The program involves not only the planning and design of intricate airport systems, but considering and planning the overall national aviation system within which they operate.

The aviation systems planning group brings together planners from throughout Air Services to work in a single committee of experts, calling on others for advice and technical assistance as required.

Chairman of the group is Dennis Hemming, whose other hat is that of Chief, Planning, Research and Development.

The group has had a number of meetings with senior officials of major international airlines in order to exchange information relative to changes which will have to be made to airports and procedures in order to accommodate the larger aircraft.

The Department provided technical data on airport operations, especially with regard to Montreal and Toronto international airports, which will be the first Canadian points to handle the big jets.

The airlines in turn were invited to outline their concept of what their new aircraft will require.

Inspection services, such as those provided by Health, Immigration, Customs and Agriculture, could easily impede the flow of passengers and goods.

Last spring, a group of representatives of all departments concerned, including some members of the Department of Transport's aviation systems planning group, made a study of European inspection services for air passengers, baggage and freight.

Following further discussions, plans have been made for innovations in passenger handling which will make procedures of Canadian inspection services the most efficient and expeditious in the world.

The Department also hires consultants to aid in the systems planning of individual airports as sub-systems of the national transportation system.

These consultants employ the various

disciplines essential to encompass the full range of technical and scientific skills required to analyse all the operating elements and component parts of an airport system and to integrate these analyses into an overall program.

In general, the consultants first develop long-range forecasts of aviation operations, economic and other factors on which future planning can be based.

They then develop an airport layout concept which will make the best use of the existing site and provide a framework within which future expansion can take place.

Finally, they recommend what developments will be necessary to meet forecast requirements of airport users during the coming 20-year period.

This includes staged development concepts for the passenger terminal area, air cargo area, general aviation area, airport operations and maintenance areas, commercial areas and road systems.

Four 20-year master plans for airport development currently are under study or in the process of completion: for Toronto, Montreal, Winnipeg and Calgary.

In addition to consultant studies, similar surveys are conducted at several airports each year by the aviation systems analysis section of Planning, Research and Development.

These studies are designed to evaluate an airport as a complex of many interrelated systems. Each system must be kept in balance with the others to en-

sure the safe and balanced flow of people, aircraft, road vehicles and cargo.

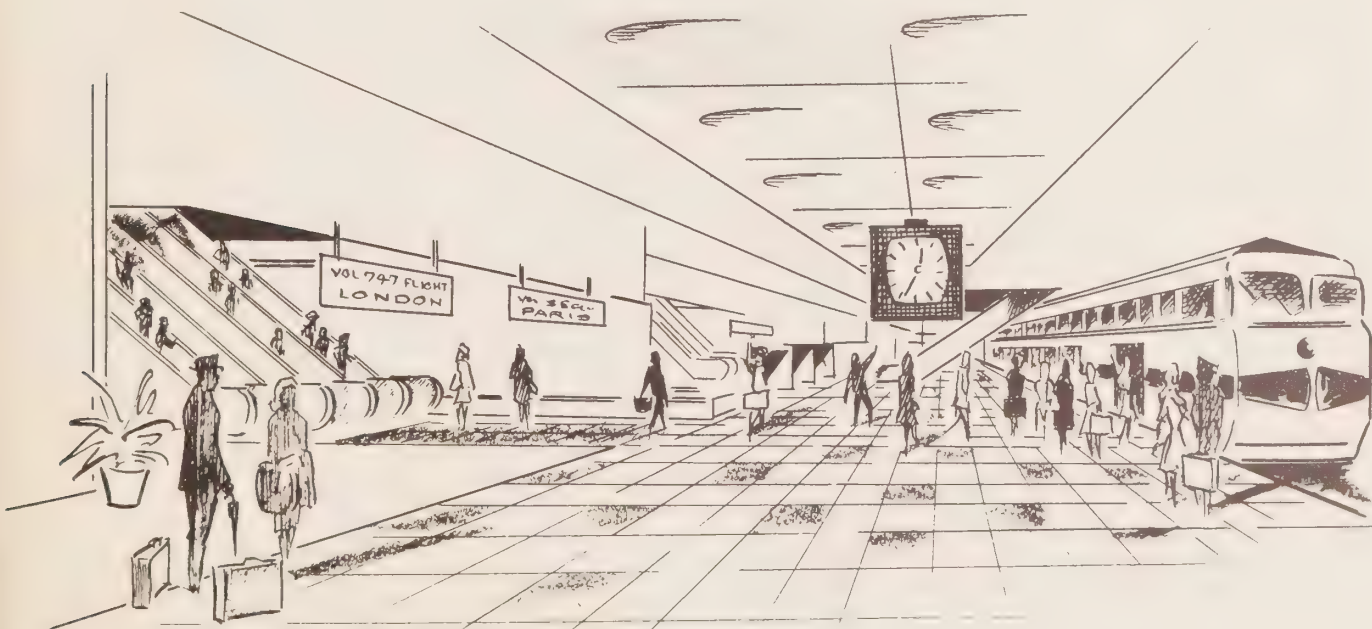
Reports of these studies make recommendations on how to keep the present systems in balance until they last out their design life. They also make 10- and 20-year forecasts for use in planning new facilities for future requirements.

An individual aviation systems analysis considers everything related to the airport. This includes the terminal area air space and the runway and taxiway systems, the various interrelated areas and activities that take place in the terminal building, the adequacy of roadways, linear curbspace, parking areas, characteristics of public ground transportation systems, general aviation requirements, and the size and suitability of cargo handling equipment and space.

In addition to its studies of current airports, the Department takes pains to keep abreast of the latest in technology and concepts in handling aircraft, passengers and goods.

The new aircraft are on the way, but they won't even start to arrive for another four years. Plans for the new air age are well in hand, but they do not call for constructing new, costly terminals and facilities long before they are needed.

It can be stated with confidence, however, that when the time comes, Canada will have ample facilities to handle the jumbos, the supersonics, and the flood of passengers and goods they are expected to bring.



Artist's conception of how the air traveller of the future may arrive at the airport.

Ce croquis d'artiste veut nous faire voir comment le voyageur de demain arrivera à l'aéroport.



# Les transports dans l'évolution économique du Canada

Par Pierre Camu

*Président de l'Administration de la Voie Maritime du Saint-Laurent.*

Pendant plus de quatre cents ans, soit depuis la découverte du pays par Jacques Cartier, parmi les modes de transports commerciaux l'un d'eux eut toujours la vedette.

Sous le régime français, de 1534 à 1760, les transports par eau constituaient le seul mode commercial de transport. Les voiliers qui arrivaient des ports de la métropole remontaient le Saint-Laurent jusqu'à Québec, puis jusqu'à Trois-Rivières et Montréal. A partir de ces trois ports fluviaux, par canot d'écorce, adopté de l'Indien, on explora d'abord une grande partie du continent nord-américain, incluant les bassins du Saint-Laurent et du Mississipi. A la suite des explorations, on établit et organisa sur une base commerciale l'exploitation des fourrures, avec forts et postes de traites bien situés aux points stratégiques de confluence ou en aval et en amont de rapides et chutes.

Entre les régions riveraines du bas Saint-Laurent et l'Acadie, dont la vallée d'Annapolis et Port-Royal, les communications et échanges se faisaient par navire. L'intendant Talon reconnut l'importance de ce moyen de transport en favorisant la création de chantiers maritimes. En 1663, on lançait le premier navire construit à Québec, événement qui marqua le début de la construction de navires en bois, industrie qui prospéra jusqu'aux environs de 1860-1870, subissant alors un déclin naturel dû à l'apparition des premiers navires à coque d'acier. Après une période de réajustement, on se lança dans la construction de navires en acier. Cette industrie n'a pas cessé de s'accroître au point de constituer aujourd'hui l'une des entreprises les plus importantes du Canada.

C'est par navire aussi que les explorateurs et commerçants britanniques pénétrèrent à l'intérieur du pays pour y organiser aussi le commerce des fourrures. Les résultats de la guerre de Sept Ans (1760) changèrent l'allégeance politique, mais les transports par eau continuèrent d'assurer les liens indispensables entre les parties peuplées du continent. Au commerce des fourrures allait succéder celui du bois.

A la fin du dix-huitième siècle on se rendit compte qu'il fallait améliorer davantage les grandes voies navigables.

Alors commença une période très active de construction de canaux le long du Saint-Laurent. Un peu plus tard, en aval de Montréal, on lança l'«Accommodation» en 1809, le premier navire à vapeur à circuler sur le Saint-Laurent; en 1817, le «Frontenac» devint le premier navire à vapeur à circuler sur les Grands Lacs.

On vit par contre apparaître un peu partout des routes carrossables entre les villes principales, si bien qu'au début du dix-neuvième siècle on pouvait, par diligence, se déplacer de Québec jusqu'à York (Toronto) et atteindre Boston en Nouvelle-Angleterre. On commença à construire systématiquement des routes provinciales après la guerre américaine de 1812.

Malgré tous ces développements, les transports par eau devaient, chaque année de novembre à la fin d'avril, s'arrêter à cause de la présence des glaces. Seuls les ports situés le long du littoral de l'Atlantique restaient ouverts en toute saison.

Le réseau routier était encore très primitif et inutilisable en certaines saisons. C'est pourquoi la construction du premier chemin de fer au Canada est une date extrêmement importante dans notre histoire des modes de transport. Quand le premier train circula, en 1836, entre Laprairie et Saint-Jean dans le Québec, on trouva ce jour-là la réponse au problème d'offrir en toute saison un moyen de transport sûr et efficace.

Ce n'est qu'à partir de 1850 que l'on commença vraiment à construire un réseau ferroviaire par rapport à la population qui était concentrée dans les parties sud de l'Ontario et du Québec et dans les provinces maritimes, et là où la révolution industrielle s'implantait. Le navire continuait, bien sûr, d'assurer les liaisons maritimes avec les pays étrangers et entre les régions riveraines non encore desservies par rail. Toutefois, le rail en tant que facteur d'expansion et de consolidation du territoire devait jouer son plus grand rôle lors de la construction du chemin de fer Pacifique-Canadien vers l'Ouest. C'est en 1885 que l'on put enfin atteindre la Colombie-Britannique et le littoral du Pacifique. Ainsi le chemin de fer, en partant de la

grande plaque tournante qu'était Winnipeg, ouvrit de grands espaces au peuplement et à l'agriculture céréalière. A l'âge des fourrures et du bois allait succéder l'âge du blé.

Au cours de cette deuxième moitié du dix-neuvième siècle, les armateurs des ports du Saint-Laurent, surtout ceux de Montréal, afin de conserver les avantages acquis par le navire, firent creuser le chenal en aval de Montréal. D'autre part, en amont, le gouvernement entreprit la construction de nouveaux canaux à quelque 12 pieds de profondeur. C'est ce système qui devait rester en vigueur jusqu'à l'ouverture en 1959 de la voie maritime du Saint-Laurent, telle qu'on la connaît aujourd'hui. On développa considérablement les ports de commerce des Grands Lacs, du Saint-Laurent et des côtes de l'Atlantique.

Avant que le réseau ferroviaire étende ses ramifications et monopolise le transport des gens et des marchandises, l'automobile faisait son apparition dans les rues de Toronto, Montréal, Ottawa et Québec. La première guerre mondiale de 1914-1918 marqua la fin de la grande période de construction des chemins de fer au pays et le début de l'expansion des réseaux routiers. Il s'agissait d'une expansion complémentaire, bien entendu, à l'essor extraordinaire de l'automobile, du camion et de l'autobus, phénomène nord-américain typique. L'automobile s'avéra donc, à partir de 1920, une menace directe au rail. Elle donnait aux Canadiens un deuxième réseau de transport intérieur, ouvert douze mois par année, efficace et rejoignant les hameaux et villages les plus reculés.

Dans la période de l'entre-deux-guerres l'avion avait permis d'explorer les vallées du Mackenzie, du Yukon et les lacs des Territoires du Nord-Ouest. Les pilotes de l'Arctique canadien s'étaient fait une réputation enviable.

Au cours du deuxième conflit mondial (1939-1945), l'aviation militaire fit d'énormes progrès. Il était donc normal qu'avec le retour de la paix, on adapta les types d'avions aux besoins commerciaux. Tout se fit à la fois dans le domaine des transports aériens au Canada à partir de 1945; on construisit des aéroports, on fonda des compagnies d'aviation, on établit des liaisons aériennes avec

l'étranger et on compléta l'exploration des territoires de l'Arctique canadien.

Qu'il suffise de rappeler que des grandes compagnies canadiennes comme Air-Canada qui a célébré son vingt-cinquième anniversaire en 1962 et le Pacifique Canadien il y a quelques mois, pour comprendre que l'essor de l'aviation commerciale correspond à la phase du développement économique le plus diversifié et le plus industrialisé qui soit au pays. L'avion était le premier mode de transport qui n'obéissait pas à la géographie du pays.

Un autre moyen de transport, le pipeline, connu aussi un grand essor dans les années cinquante avec la construction des grands pipe-lines trans-canadiens qui transportent aujourd'hui le pétrole et le gaz naturel des Prairies à peu près partout entre Montréal et Vancouver.

C'est pendant les années cinquante qu'on construisit des lignes ferroviaires spécialisées, en ce sens qu'on construisit ces lignes entre les ports du golfe Saint-Laurent et les mines de fer de Terre-Neuve et du Nouveau Québec. Ce développement économique régional important était relié à l'ouverture de la voie maritime et à l'approvisionnement en minerai de fer des industries sidérurgiques des Grands Lacs.

Pour mieux estimer le rôle que joue aujourd'hui chacun des principaux modes de transport, nous présentons le tableau suivant:

**Pourcentage du trafic interurbain par mode de transport**

	1938	1941	1951	1956	1965
Eau.....	42.2	27.4	24.5	23.8	26.5
Rail.....	54.7	69.5	63.8	55.8	41.8
Route.....	3.1	3.1	8.2	7.5	9.3
Air.....	—	—	—	—	—
Pipe-line.....	—	—	3.5	12.9	22.4

SOURCE: Bureau Fédéral de la Statistique.

Ces pourcentages ne représentent qu'un genre de trafic commercial. Si l'on y ajoutait le trafic des camions de fermes, et celui des camions privés, et si l'on ajoutait le trafic des automobiles privées servant au transport des voyageurs à travers le pays, il est évident que la route représenterait un fort pourcentage du trafic total aujourd'hui.

Tout de même, le rail et l'eau continuent d'occuper une place prépondérante. Les transports par eau depuis l'ouverture de la voie maritime en 1959 ont gagné quelques points et maintiennent leur part du trafic. Les chemins de fer cependant déclinent et perdent du terrain. Les pipe-lines ont capturé une grande partie du trafic des pétroles et du gaz naturel. C'est le moyen de transport qui a réalisé les plus grands gains au cours des quinze dernières années.

*Cet article est le premier d'une série qu'on se propose de faire paraître dans la revue au cours des mois à venir. Ces articles, reproduits avec l'autorisation des auteurs, ont paru dans la revue française «Transports» qui a consacré son numéro de juin dernier à l'évolution des transports au Canada.*

*This is the first in a series of articles by experts on Canadian transportation which will appear from time to time on these pages. Taken from "Transports," the voice of the transportation industry in France, the articles were commissioned for a special edition of the magazine published to mark Canada's Centennial.*



Main route to the north.

Un coin isolé du Nord.



# *their work helps speed our nation's business*

by Bryan Goodyer  
Information Services Division

A relatively little-known but vitally important agency of the Department of Transport is working toward the day when any Federal Government employee in Saint John for instance can dial a Government telephone in Vancouver or any major Canadian city without the aid of an operator.

"Right now the system exists only between Ottawa, Toronto and Montreal, but we're working toward the day when everyone will be able to call everyone else," says J. B. (Jack) McDermott, commercial staff officer with the Administrative Telecommunications Agency which co-ordinates the communications

needs of all Government departments and agencies.

The job is complex but has, nevertheless, paid off in tremendous savings since the ATA was established in February 1965.

In certain cases, it now costs less to make an inter-city call than to write a letter. Savings of \$4,000,000 were reported in 1966 for long distance calls that would have cost the Government \$5,500,000 at direct distance dialing rates.

The cost of a typical six-minute long distance Ottawa-Montreal call during office hours is \$3.25 at the commercial person-to-person rate, \$1.55 by direct distance dialing, but only 13 cents through the private Government system.

(The cost of letters is estimated by various management authorities at \$1.50 to \$2.50 and up, depending on several factors. The average cost of Government telegrams is about \$2.10 each when sent the regular way, or 85 cents by Telex.)

The Government is the biggest customer of the Bell Telephone Company of Canada in terms of dollars, geography and people.

As G. H. Mellen, Federal Government communications manager for Bell says: "The Government is run as a tremendously large corporation, staffed by astute business-conscious men who like to drive a hard bargain. Many of the services we provide are in a competitive field, which means we have to be ready to meet their needs faster and better than the other fellow if we want to keep or increase our share of the Government's communications dollar."

That dollar is a big one.

Last year the Government spent \$40,000,000 on communications including everything from the most complex needs to the girls who operate the prime minister's special switchboard.

We have, one might conclude, come a long way from the Government telephone system which originally consisted of small switchboards in the individual departments.

These were amalgamated into one large facility in Ottawa during the Second World War for reasons of efficiency and economy.

In the 22 years that followed, most departments have been greatly expanded, new ones have been created and these and Crown agencies now have a huge volume of long distance telephone calls to make all over Canada and often overseas.



Operators on the special government switchboard at the Bell Telephone Company building in downtown Ottawa help speed local and inter-city calls that get Canada's business done.

*Les téléphonistes attachées au standard téléphonique spécial du gouvernement à l'édifice de Bell Canada, à Ottawa, s'acharnent à diriger le plus rapidement possible les appels urbains et inter-urbains nécessaires à l'administration des affaires de l'État.*

The ATA was set up in 1965 as a result of the Glassco Commission report and the first training courses for telecommunications service officers were held a year later.

Today the agency has a staff of 15 working out of the D.O.T.'s Number Three Temporary Building in Ottawa and 18 officers working in six regions across the country that correspond to the Department's six Air Services regions.

The agency holds continuing training seminars to keep its officers in the field up to date on the direction of its rapidly expanding facilities and to keep departmental telecommunications officers aware of new services.

Now that telephone service between Ottawa, Toronto and Montreal is integrated, the agency is working on plans to include Quebec City, Halifax, London (Ont.), Winnipeg, Edmonton, Victoria, and others.

"Before 1970, direct private line dialing should be available for all unrestricted consolidated Government telephones, although subject to administrative and physical restraints which have yet to be worked out for departmental controls and equitable expense recovery," said V. C. McDonald, who has been acting as administrator until the recent appointment of A. Bruce Donaldson as chief of the agency.

Despite its long range plans and diverse activities in every phase of Government communications, the heart of the agency's job still remains with the 60,000 telephones on public servants' desks.

Ottawa has 27,750 consolidated Government telephones and 24 operators, Toronto has 1,873 telephones and nine operators, and Montreal has 1,171 telephones staffed by four operators.

In the course of its work, the ATA has learned quite a bit about the people it serves.

The average installation has two telephones and four or five people who use them, making altogether about two commercial long distance calls as well as eight Government System inter-city calls each month.

At least one of the commercial calls on the average could have been made for 85 cents on the Government's facilities instead of \$2.85, which indicates, says the ATA, that one person in five needs more instruction on how to use the "Directions" in his Government Directory.

The remaining four out of five are placing their calls efficiently and making them at an average \$9.40 expense per month per Government main line, compared to a cost of \$30 if these calls had been placed through commercial services.



## nommé chef de l'ATA

M. A. Bruce Donaldson, âgé de 44 ans, de Montréal, a assumé récemment la direction de l'Agence des télécommunications administratives au ministère des Transports.

La nomination de M. Donaldson, ingénieur des télécommunications, est la première faite à la suite d'une campagne de recrutement effectuée dans tout le pays en vue du choix de quatre spécialistes pour diriger les divisions techniques au sein du nouveau Bureau des télécommunications de l'État.

La création de ce Bureau a été recommandée par la Commission Glassco. Son organisation a été confiée à M. F. G. Nixon, ci-devant directeur des Télécommunications et de l'Électronique au ministère. Le Bureau est chargé de recommander, sous réserve de leur étude par le ministère ou le gouvernement, des régimes et lignes de conduite d'ensemble en matière de télécommunications, tant de nature nationale qu'internationale. Il doit également coordonner les services de télécommunications du gouvernement fédéral.

A titre de chef de l'Agence des télécommunications administratives, M. Donaldson est chargé des besoins des ministères et des organismes du gouvernement fédéral en matière de télécommunications et collabore dans ce domaine avec les sociétés commerciales.

Il est également chargé de la gestion des services de télécommunications interurbains unifiés et d'autres services des communications administratives. Il participe à la prévision des tendances d'ensemble des besoins en matière de télécommunications et dirige l'établissement des normes techniques qui doivent être appliquées.

Natif d'Orillia, en Ontario, M. Donaldson détient un baccalauréat en sciences appliquées de l'Université de Toronto.

## chief named to head ATA

A. Bruce Donaldson, a 44-year-old Montreal telecommunications engineer, has assumed his appointment as chief of the Administrative Telecommunications Agency with the Department of Transport.

Mr. Donaldson's is the first appointment arising from a Canada-wide search for four experts to head technical divisions within the Department's new Telecommunications Policy and Administration Bureau.

The Bureau, which is being organized by F. G. Nixon, former director of the Telecommunications and Electronics Branch of the Department, has been established in line with recommendations of the Glassco Commission to develop, co-ordinate and recommend broad telecommunications plans and policies both national and international for appropriate ministerial or government consideration and to assist in co-ordination of the federal Government's telecommunications services.

As chief of the ATA, Mr. Donaldson will be responsible for the administrative telecommunications needs of the federal Government departments and agencies and for co-operation with commercial companies.

He will also be responsible for the management of the consolidated intercity and other administrative telecommunications services, will participate in forecasting broad trends of telecommunications requirements and directing the development of technical standards to be applied.

A native of Orillia, Ont., Mr. Donaldson has been employed by the Bell Telephone Company of Canada at Montreal since his graduation from the University of Toronto in 1950 with a Bachelor of Applied Science degree.

He is married and has four children.



# Des étudiants d'un collège américain adoptent le n.g.c.c. "Alexander Henry"

Un navire de la Garde côtière canadienne, le brise-glace baliseur «*Alexander Henry*», a maintenant son nom inscrit en toutes lettres à l'entrée d'un édifice sis au cœur du campus d'un collège américain. Il s'agit d'une initiative des étudiants de Lake Superior State College, à Sault Ste-Marie, au Michigan, qui ont décidé de nommer une aile de leur résidence en l'honneur du navire canadien qui, depuis 1962, patrouille les eaux des Grands Lacs au service de la navigation maritime.

Le geste posé par les étudiants a été officiellement reconnu par la Garde côtière, en octobre dernier, lorsque le navire, au terme d'une de ses dernières missions dans le lac Supérieur avant l'arrivée des neiges, s'est arrêté à Sault Ste-Marie, en Ontario, pour accueillir les étudiants du collège venus à sa rencontre.

Les étudiants, en compagnie de leur doyen, M. Bernard Smith, ont été reçus à bord par le capitaine Eudore Vézina et les membres de son équipage. Après une visite du navire, le capitaine a remis aux étudiants, en guise de souvenir, une magnifique photo en couleur du n.g.c.c. «*Alexander Henry*». La photo a été prise au cours des mois d'été alors que le brise-glace naviguait au large de son port d'attache, à Parry Sound, Ontario. Les étudiants se proposent de l'accrocher au tableau d'honneur à l'entrée de leur résidence.

Sans doute banal en soi, l'événement mérite tout de même d'être signalé, croyons-nous, puisqu'il constitue en fait une autre preuve de l'intérêt que suscite aussi bien à l'étranger que chez nous le travail de la Garde côtière canadienne.

Pour les étudiants eux-mêmes, c'était une expérience sans doute fort enrichissante. La plupart de ces jeunes montaient pour la première fois à bord d'un brise-glace canadien. Ils en sont repartis avec la conviction d'avoir ajouté quelque chose d'important à leur bagage de connaissances générales. Pour le capitaine Vézina et les membres de l'équipage, le moment vécu au contact d'un groupe aussi intéressé a été des plus agréables.

Les services de la Garde côtière canadienne sont en grande demande dans la région des Grands Lacs depuis un certain nombre d'années, surtout depuis l'ouverture de la Voie maritime du

Saint-Laurent. Les navires patrouillant ces eaux sont attachés aux agences de la marine du ministère des Transports à Parry Sound et à Prescott, en Ontario. Le ministère a également une sous-agence à Port Arthur.

La flotte du ministère opérant dans les Grands Lacs se compose d'une quinzaine de navires, dont deux, soit le n.g.c.c. «*Alexander Henry*» et le n.g.c.c. «*Simcoe*», sont des brise-glace légers qui, en plus de s'adonner à la pose et à l'entretien des bouées et balises ainsi qu'au ravitaillement des phares, sont chargés du déglacage nécessaire pour garder les voies ouvertes pendant la saison de navigation. En juin 1969, un nouveau brise-glace à deux hélices, actuellement en construction chez Davie Shipbuilding, à Lauzon, au Québec, sera mis en service dans les Grands Lacs.

Les autres navires de la flotte, utilisés surtout pour le balisage, sont le «*Grenville*», le «*C. P. Edwards*», le «*Nokomis*», le «*Kenoki*», le «*Parry Sound*», le «*Navaid II*» et le «*Marmot*». Plus légers, ces navires ne sont pas renforcés pour naviguer dans les glaces et servent plutôt comme bateaux de travaux.

A ceux-là s'ajoutent les cotres de recherches et de sauvetage qui patrouillent régulièrement les Grands Lacs pendant toute la saison de navigation. Ces cotres sont équipés de tout l'outillage nécessaire pour secourir les naufragés. L'un d'eux a même le personnel et l'outillage pour faire des réparations sous-marines temporaires à un navire en détresse. Quatre cotres de recherches et de sauvetage, soit le «*Relay*», le «*Spume*», le «*Spray*» et le «*Spindrift*» sont attachés à l'agence de Prescott. Un cinquième est affecté aux recherches et au sauvetage dans la région de Windsor.

Face à l'expansion que prend le commerce maritime dans la région des Grands Lacs, les responsabilités de la Garde côtière canadienne, comme on peut le constater, augmentent à un rythme accéléré dans ce secteur du pays. Le geste que viennent de poser les étudiants d'un collège du Michigan, en nommant une aile de leur résidence en l'honneur d'un de nos navires, doit enfin servir à nous rappeler l'importance du rôle joué par la Garde côtière non seulement dans la région des Grands Lacs mais partout où ses services sont requis.

WELCOME ABOARD—Students from Lake Superior State College at Sault Ste. Marie, Michigan, are welcomed aboard CCGS Alexander Henry at Sault Ste. Marie, Ont. The students, who named a new wing of the college in honor of the Canadian icebreaker, were invited aboard by Captain Eudore Vézina, centre, who presented them with a color photograph of the ship, while Connie Mattson, left, and Louis N. Rassay responded by presenting the ship with a pennant inscribed with the college's name.

(Photo courtesy Sault Daily Star)

BIENVENUE À BORD—Des étudiants de Lake Superior State College, à Sault Ste-Marie, au Michigan, sont accueillis à bord du n.g.c.c. "Alexander Henry". Les étudiants, qui ont nommé une aile de leur résidence au collège en l'honneur du brise-glace canadien, étaient les invités du capitaine Eudore Vézina qui leur a remis en guise de souvenir une photo en couleur du navire. On voit, au premier plan, le capitaine en train de présenter la photo à Mlle Connie Mattson, alors qu'un autre étudiant, Louis N. Rassay, lui remet un fanion portant l'emblème du collège.

(Photo du Sault Daily Star)

students  
honor  
coast  
guard  
ship



A modern new addition to the campus of Lake Superior State College at Sault Ste. Marie, Michigan, proudly bears the name of the Canadian Coast Guard Ship *Alexander Henry*.

The new building was named in honor of the 1,674-ton Great Lakes icebreaker in a gesture of international goodwill by the college's student body.

The students' generosity was officially recognized by the Coast Guard last October when the Parry Sound-based ship, nearing the end of its last trip into Lake Superior before freeze-up, stopped at Sault Ste. Marie, Ont., for a special meeting with the students who had informally "adopted" it.

A group of them, accompanied by Dr. Bernard Smith, dean of students at Lake Superior State College, were welcomed aboard the *Alexander Henry* by Captain Eudore Vezina and the members of his crew.

Following a tour of the icebreaker the students were presented with a large framed color photograph of the ship which will hang in the entrance to the new wing.

For the students, the visit provided an unusual experience because they had never before been on board a Canadian ship while, for the crew, it afforded an excellent opportunity to show off their ship to an unusually interested audience.

The fleet operated by the Department of Transport in the Great Lakes comprises a dozen ships based at marine agencies at Parry Sound, Ont., on Georgian Bay, Prescott, Ont., on the St. Lawrence River, and a sub-agency at Port Arthur, Ont., near the head of the lakes.

Of this fleet, the *Alexander Henry* and CCGS *Simcoe* are light icebreakers which, in addition to maintaining aids to navigation and supplying lighthouses

on the Great Lakes, are used to keep the shipping lanes free of ice during the navigation season.

In June 1969, a new icebreaker now in construction at the yards of Davie Shipbuilding at Lauzon, Que., will join a fleet that includes ships with such names as *Grenville*, *C. P. Edwards*, *Nokomis*, *Kenoki*, *Parry Sound*, *Navaid II*, *Marmot*, *Relay*, *Spray*, *Spume* and *Spindrift*.

Facing the continued expansion of maritime traffic on the Great Lakes the responsibilities of the Canadian Coast Guard are becoming increasingly heavier and so the students' gesture in naming a wing of their residence in honor of one of these ships serves perhaps to underline the importance of the role played by the Coast Guard, not only in the Great Lakes, but wherever its services are required.



*five  
bursary  
winners  
now deep  
in studies*



by Bryan Goodyer  
*Information Services Division*

The five winners of the 1967 Department of Transport bursaries are now deep in the throes of their first year at college, thanks in part to a generous gesture nearly five years ago by D.O.T. employees.

The five, who include three girls and two boys, are: Gwenyth L'Hirondelle, Fort Nelson, B.C., Denise M. A. Schuetze, Sidney, B. C., Cheryl L. Stewart, Ottawa, John Roger Walker, Winnipeg, and Paul Graham Knox, Vancouver.

All were awarded \$500 bursaries as part of the Department's annual student aid program designed to encourage and financially assist children of serving, retired and deceased employees of the Department to obtain a university education.

The funds for these bursaries are derived from the annual interest revenue from the investment of the balance of \$25,000 in surplus D.O.T. insurance funds remaining after plebiscites held in 1961 and 1964, in which employees elected either for the return of their pro rata share of the surplus funds or to have their share transferred to the scholarship fund.

Revenue from the trust fund, although originally sufficient to provide for only three bursaries, now provides for five annual awards.

### Gwenyth L'Hirondelle

Gwen L'Hirondelle, daughter of P. D. L'Hirondelle, officer-in-charge of the weather office at Fort Nelson, B.C., was born at Peace River, Alberta, 16 years ago.

After completing her elementary grades in Whitehorse, Yukon Territory, and junior high school in Fort Nelson, she graduated from Grade 12 at Victoria Senior Secondary School with a 91 per cent average.

Gwen, whose hobbies are music, sewing and swimming, is now attending the University of Victoria where she is majoring in English.

In addition to the D.O.T. Bursary, she also received a scholarship from the Government of British Columbia and the Sara and Jean MacDonald Bursary, administered by the University of Victoria.

### Denise M. A. Schuetze

Denise, daughter of E. E. Schuetze, a mechanic at Victoria International Airport, was born in Bella Coola, B.C., and attended elementary school in Keremeos and Vancouver before graduating from North Saanich High School, Sidney, B.C.

A member of the biology club at the University of Victoria where she is studying bacteriology toward a Bachelor of Science degree with honours, Denise is interested in sewing, cooking, playing the guitar and being outdoors.

After graduation, the youthful scholar says she would like to obtain her Master's degree in Science and perhaps join the National Research Council.



**Cheryl L. Stewart**

Daughter of Roger M. Stewart, an electronics technician at headquarters, Cheryl is taking a science course toward a Bachelor of Science degree with honors in chemistry at Carleton University.

The 18-year-old scholar, who was named an Ontario Scholar and won the \$400 Francis C. C. Lynch Scholarship in addition to the D.O.T. Bursary, is a graduate of Brookfield High School in Ottawa.



**John Roger Walker**

John Roger Walker, 17, son of Roger H. Walker, superintendent of works and plant services for the Winnipeg air services region, was an honor student throughout high school.

Graduating from River East Collegiate, John received an average of 88.8 per cent in his Grade 12 examinations, won the first Isbister Scholarship awarded in his district, a \$250 Centennial Scholarship and a \$150 award from the Municipality of North Kildonan for having the highest average in his high school in addition to the D.O.T. Bursary.

John is currently enrolled in science at the University of Manitoba, is interested in camping, travelling and the outdoors, but as yet is undecided as to a future career.



**Paul G. Knox**

Paul, son of J. L. Knox, regional meteorologist with the Vancouver air services region, was born in Toronto and attended elementary school there.

After attending Burnhamthorpe Collegiate for two years, Paul enrolled at Magee High School in Vancouver when his father was transferred to the west coast.

Active in musical productions, the student council and the school newspaper, Paul graduated from Magee with first class honors and is now enrolled in first year arts at the University of British Columbia.

In addition to the D.O.T. Bursary, Paul won a \$300 B.C. Government scholarship.

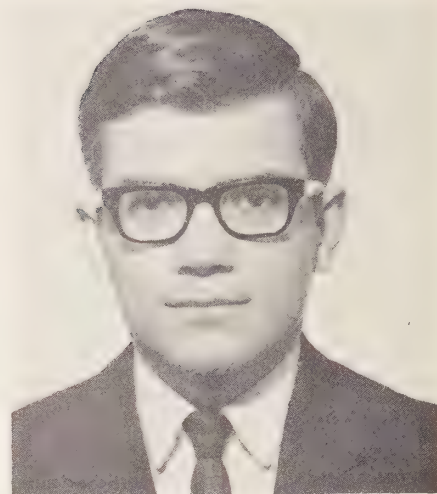
He plans to take an honors degree in sociology and then go into either law or town planning.





Roberta Pattison

## where are they now?



Howard Baker

It was just over four years ago that the first D.O.T. "scholars" were named and presented with \$400 bursaries to help them finance their first year of college.

Where are they now?

Roberta Pattison, now 22, daughter of Robert F. Pattison, officer-in-charge of the meteorological station at Saskatoon, has completed four years of higher education at the University of Saskatchewan.

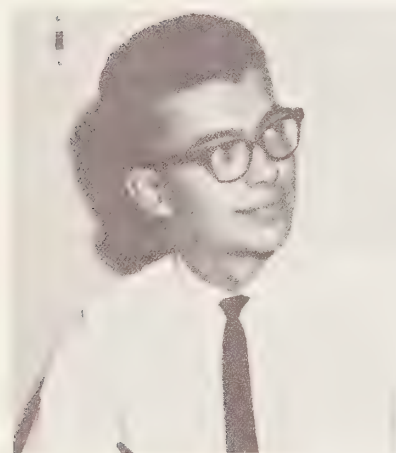
After completing the two-year pre-veterinary course, she was accepted into the first class of the new Western College of Veterinary Medicine and is now midway through the four-year course, reports her dad.

Roberta spent last summer working in the Department of Pathology at the college.

G. Kenneth Hryciw, now 20 years old, the son of Edmonton air traffic controller Emile Hryciw, has completed three years towards an honours degree in mathematics, taken a year off to earn money to return to university and is now back at the University of Alberta in Calgary to complete his education.

Howard J. M. Baker, who is now 21, has also just returned to Dalhousie University in Halifax after taking a year off to work.

The son of Howard Baker Sr., a D.O.T. radio technician at Gander, Newfoundland, Howard expects to complete his studies and receive his Bachelor of Science degree in the Spring.



G. K. Hryciw

## in pursuit of excellence

Among the many sons and daughters of D.O.T. personnel who have excelled academically in addition to the five annual bursary winners is Melissa Keddie, daughter of D. D. G. Keddie, executive assistant to the assistant deputy minister for air.

Melissa, who graduated from Ottawa's Lisgar Collegiate with a total of nine awards, is now deep in studies at York University's Glendon College where she is taking a general arts course specializing in languages and the humanities.

Among her prizes, Melissa counted the York University governor's scholarship, valued at \$1,500, and the \$400 awarded her as an Ontario Scholar because she scored an average of more than 80 per cent in her Grade 13 examinations.

In addition, Melissa won the Christie-Hill medal for French, the James Hope medal for history, the Madaleine de Vercheres Chapter of the Imperial Order Daughters of the Empire scholarship in Grade 13 history, the Thomas Wardrope scholarship for classics, the Ontario Department of Education award for the highest mark in Ontario in Grade 13 history, the silver medal for an average of 90 per cent on her year's work, and the Upper School cup for standing highest in her grade.

And the future?

"Melissa has always been interested in the United Nations and its endeavors," says Mr. Keddie. "She's looking forward to work among the developing countries of the world after graduation."



Melissa Keddie

# d.o.t. technicians reach for the top

by William Dunstan  
Information Services Division



Halfway up Mara Mountain, the D.O.T. crew finds it tough going in 18 inches of fresh snow.



D.O.T. employee at way station, three miles from the top of Mara Mountain.

When the snow flies, spare a thought for the telecommunications and electronics staff at Enderby, B.C., and their twice-weekly climb up Mara mountain to check the Vortac station that nestles right inside the summit.

The three-man crew consists of Dick Archer, officer-in-charge; W. D. Sheldon and A. Efting. Their office is located in the Village of Enderby, from which they make their periodic trips up the mountain.

In winter, the trip is made in a tracked vehicle up the snow-covered bush road, a distance of about 15 miles. Earl Porter, Telecom's chief of operations, vividly recalls one such trip.

"One of the treads on our vehicle broke," he said, "and we had to go up by foot in order to call for repairs. I jumped out before putting on my snowshoes, and immediately sank above the waist in loose, powdery snow."

At 6,600 feet above sea level, the VOR above Enderby is second highest in Canada. Other sites in the Rockies are at Kimberley, 7,500 feet; Princeton, 5,500 feet, and Victoria, 2,000 feet. They form the last link in a VOR air navigation system right across Canada.

VOR, which tells the pilot the direction of his position from the station, is difficult to install in mountainous terrain because the signal may bounce off surrounding peaks, thus giving the pilot erroneous information. The usual procedure is to place the antenna close to the ground in the centre of a large level area on the highest mountain peak in the immediate area. In this manner the surrounding terrain is "hidden" from the antenna so that no radiation is reflected.

At Enderby, they provided a flat expanse by blasting off the top of the mountain and constructed the building underground. It is connected with the outside by means of a tunnel.

In addition to VOR, the Enderby station is equipped with a Tacan unit, a navigational aid which gives the pilot his bearing and distance from the unit. It is thus categorized a "Vortac" station.

Three miles up the mountain is a non-directional beacon and a remote transmitter for direct controller-pilot communications. This spot, which is near an automatic weather station reporting to the office in the village, is equipped with sleeping accommodation and a kitchen for use by the inspection team, which uses it as a base camp for the climb to the top. The Vortac location is extremely noisy due to air conditioners and other machinery and unsuited for a lengthy stay. There is accommodation at the top, however, in case the party is marooned by storms or for any other reason. Walkie-talkie sets are carried for communication with the village in case of difficulties and there have been occasions when a helicopter was engaged to bring a party down from the top.

No sympathy is due the crew in summer, however, for then the mountain is transformed. The large area at the top is an alpine meadow lush with green grass and a wide variety of floral colour. Vehicles must keep to the gravelled road for the swampy meadows will not support their weight except in winter. The men are free to stroll, however, among the lovely, rare plants which attract nature study groups from miles away.



# TRANS-CANADA

## Tribute to Canada

Confederation Point, N.W.T.—

EN L'HONNEUR

DU CENTENNAIRE DE LA CONFÉDÉRATION  
CANADIENNE

ERECTED BY THE CADETS OF THE  
CANADIAN COAST GUARD COLLEGE

SERVING ABOARD

C.C.G.S. LABRADOR

COMMANDED BY CAPTAIN I. GREEN  
IN POSITION

80 38'30" N 87 15' W

NOW NAMED

CONFEDERATION POINT

AUGUST 24, 1967

A MARI USQUE AD MARE

With these words, Canada's most northerly Centennial project was dedicated last summer by 14 cadets from the Canadian Coast Guard College at Sydney, N.S., serving aboard the Canadian Coast Guard Ship *Labrador*.

The cairn was erected on an unnamed point north of the Department of Transport weather station at Eureka on Ellesmere Island, less than 600 miles from the North Pole.

## Suggestion Awards

**Ottawa**—Two Department of Transport employees received \$30 suggestion awards recently for suggestions that improved operations.

J. P. Francis of Peterborough, Ont., a lockmaster at the Hyde Lift Lock on the Trent Canal, won his award for a suggestion that led to the elimination of a vexing engineering problem in the construction of coffer dams at canal locks.

C. W. Purchase, a lightkeeper at Cape Bonavista, Bonavista, Nfld., won his award for suggesting an improvement to the construction of water cisterns at D.O.T. lighthouses.



**THE MAKING OF HISTORY**—Captain Ivan Green, master of the Canadian Coast Guard Ship *Labrador*, and (left to right) Cadets Robertson, Maillette and Purney of the Canadian Coast Guard College at Sydney, N.S., were among a group of cadets and ship's officers who literally made history last summer when they completed Canada's most northerly Centennial project, the erection of a cairn on a point of land on remote Ellesmere Island dedicated to Confederation. The photographs taken and the story of the project (see "The DOT" of September-October 1967) are now a part of the College's official history.

**UN GESTE QUI PASSE À L'HISTOIRE**—Le capitaine Ivan Green, du n.g.c.c. "Labrador", est photographié ici en compagnie de trois élèves-officiers du Collège de la Garde côtière canadienne devant un cairn érigé, comme projet du Centenaire, sur l'île Ellesmere, aux confins nord de l'Arctique. Un cairn jumeau, renfermant des documents sur la Garde côtière et sur le collège ainsi que des vœux du Gouverneur général Roland Michener, a également été érigé sur l'emplacement du collège à Sydney, N.-É. (Voir numéro de septembre-octobre 1967 de la revue "The DOT"). Les élèves-officiers dans la photo sont, de gauche à droite, Robertson, Maillette et Purney.

## Special Stamp to Honor Met.

**Ottawa**—The Post Office Department has announced that a special stamp commemorating the 200th anniversary of the first meteorological readings made in Canada will be issued on March 13.

The readings, the first recorded observations by barometer and thermometer in Canada, were officially recorded on Sept. 10, 1768 at Prince of Wales Fort near Churchill, Man.

There are, reports the Meteorological Branch, remarks on the weather of earlier record made by soldiers and explorers but these are largely non-instrumental and were made in transit rather than at a fixed point over a period of time.

The observations made at Prince of Wales Fort were published in the Philosophical Transactions of the Royal Society in 1771 by William Wales and Joseph Dymond, both prominent scientists of the day who had come out to Hudson Bay as guests of the Hudson Bay Company and under instructions from

the Royal Society to observe the transit of Venus.

Wales, one of the foremost astronomers and mathematicians of his time, later accompanied Captain Cook on his two voyages around the world.

The Wales and Dymond observations were made under the headings of barometer, thermometer (one inside, one outside), winds, weather and other miscellaneous headings.

Observations were made three times a day on the average, but there are some days with two, some with three, and the occasional day with as many as five observations.

The first weather entry dated Sept. 10 notes it was "rainy with a gentle breeze" and the final one records that the two weathermen "took down the instruments and packed them up."

"These men," our meteorologists agree, "would be most intrigued with



the way in which the weather, which is now observed at the airport, about 10 miles from Fort Churchill, is gathered."

**MUTATIONS À LA GARDE CÔTIÈRE**—Le capitaine Charles-H. Couillard, en bas à droite, vient d'assumer le commandement du n.g.c.c. Simon Fraser, en remplacement du capitaine Elphège Pelletier, à gauche, qui se voit confier le commandement du nouveau brise-glace de la Garde côtière canadienne, le J. E. Bernier. Le capitaine Couillard, dans les services de la marine du gouvernement depuis 1936, était capitaine à bord du n.g.c.c. Chesterfield. Le capitaine Pelletier, de son côté, est à l'emploi du ministère des Transports depuis 1953. Il a également servi comme officier à bord du Chesterfield et a occupé diverses autres fonctions avant d'être nommé capitaine du Simon Fraser en juin 1965.



**NEW COMMAND**—Captain Charles H. Couillard, right, takes command of CCGS Simon Fraser from Captain Elphège Pelletier, left, who has been named master of the Canadian Coast Guard's newest icebreaking supply ship, CCGS J. E. Bernier. Capt. Couillard, who joined the government service on July 7, 1936 as a seaman, was master of CCGS Chesterfield prior to his new appointment. Capt. Pelletier, who joined the D.O.T. May 2, 1953 as third officer aboard CCGS Chesterfield, and after several other appointments, was named skipper of the Simon Fraser on June 28, 1965.

### A Letter of Thanks

**Ottawa**—It was beginning to look like another routine night for Ron Williams, an air traffic controller in the Ottawa tower, when an urgent signal from the pilot of an aircraft apparently lost over the Ogdensburg-Watertown area of New York state broke in on the tower's normal activity.

Mr. Williams quickly but quietly identified himself, ascertained the relevant information, then proceeded to give the pilot directions for landing at Watertown Airport.

He also enlisted the aid of a second aircraft which his radar indicated was in the area and was relieved to hear about 15 minutes later that the lost aircraft was over the Watertown field and landing.

Ottawa Tower subsequently received a letter of thanks from the pilot, Barbara Fasnacht of Lancaster, Penn., in which she explained how she came to get lost.

"For you it may have been the routine 'just-in-the-line-of-duty' procedure for which your air traffic controllers are so thoroughly trained," she said. "For me, of course, it was a potentially frightening experience during which your calm guidance and constant communication never permitted me to leap beyond concern and into panic."

"I only know that you were there and I was not alone," she added. "That was enough for me."

### Met. Film Premieres

**Ottawa**—"In One day," the 18-minute color film on Canada's weather service, has been previewed and received "rave" reviews from members of the Meteorological Branch and senior D.O.T. officials in Ottawa.

The National Film Board has also announced that theatrical rights to the 35 mm film have been sold to Columbia Pictures for release in theatres across Canada.

The film, which gives a handsomely impressionistic view of what goes on day in and day out from Weather Station Alert to Ocean Station Papa to the outskirts of Metropolitan Toronto, was produced by a National Film Board crew under writer-director J. J. Carney.

It opens with a . . . but wait . . . why not see for yourself. Watch for it at your local theatre!



**WATER, WATER EVERYWHERE**—West Coast lightkeepers and their families, who normally depend on the rain water they catch for household use, recently experienced a dry spell through a lack of moisture. To solve the problem, CCGS Estevan was pressed into service to get loads of water to the lighthouses. Water is taken aboard a barge off the Canadian Pacific Railways wharf at Nanaimo, then Second Mate Tony Fitch (above) pilots the barge out to the Gallows Point lighthouse where hoses are connected and the water races on its way to fill the tanks.

**DE L'EAU PARTOUT. . . MAIS RIEN À BOIRE**—Les gardiens de phares de la côte ouest se fient habituellement sur l'abondance de la pluie dans la région pour s'approvisionner en eau potable. La pluie s'est cependant faite rare pendant un certain temps, cette année, et il a fallu faire appel à la Garde côtière qui a dépêché le n.g.c.c. "Estevan" au secours des assoiffés. On voit ici un membre de l'équipage, Tony Fitch, qui, à l'aide d'une péniche, est allé cueillir de l'eau au quai du Canadien Pacifique à Nanaimo. Avec sa provision d'eau, il est en route pour le phare de Gallows Point.



# Transport ALBUM des Transports



## SAGUENAY/BAGOTVILLE AIR TERMINAL

### COST OF TERMINAL:

\$460,000

### NO. OF RUNWAYS:

Two, one 6,000 feet in length, the other 10,000 feet long.

### PASSENGER TRAFFIC (1966):

92,339

### AIRCRAFT MOVEMENTS (1966):

42,843

Officially opened Nov. 21, 1967

## AÉROGARE DU SAGUENAY/BAGOTVILLE

### COÛT DE L'AÉROGARE:

\$460,000

### NOMBRE DE PISTES:

Deux, l'une de 6,000 pieds et l'autre de 10,000 pieds.

### NOMBRE DE VOYAGEURS (1966):

92,339

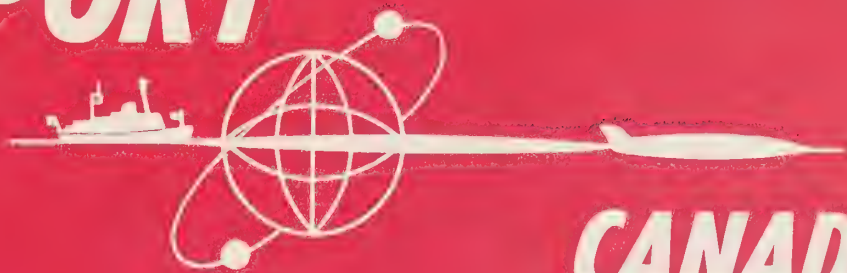
### ARRIVÉES ET DÉPARTS (1966):

42,843

Inaugurée officiellement le 21 novembre 1967

# TRANSPORT

MARCH—APRIL 1968  
MARS—AVRIL



# CANADA

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**Editor** Bryan R. Goodyer  
**Rédacteur français** Edouard Deslauriers

TRANSPORT is a staff magazine published by the Information Services Division of the Department of Transport, Government of Canada, under the authority of the Minister, Hon. Paul T. Hellyer.

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## OUR COVER

His Excellency Governor General Roland Michener paid a special visit on board the Canadian Coast Guard Ship *J. E. Bernier* last February 25 to watch the canoe race held during the Quebec Winter Carnival. Quebec photographer Maurice Edwards took our cover photo as the helicopter carrying the Governor General was leaving the ship's flight deck to get a bird's eye view of the canoeists' progress in the St. Lawrence. Just minutes before, the Governor General had given the signal that started the big race.

## FRONTISPICE

Son Excellence le gouverneur général Roland Michener s'est joint au personnel à bord du n.g.c.c. «*J. E. Bernier*,» le 25 février dernier, afin de pouvoir suivre de plus près la course de canots tenue dans le cadre du Carnaval annuel de Québec. Le photographe Maurice Edwards, de Québec, a pris cette photo au moment où un hélicoptère transportant le gouverneur général décollait du pont du navire pour survoler le parcours suivi dans le fleuve par les canotiers. Plus tôt, le gouverneur général avait donné le signal de départ de la course du pont d'envol pour hélicoptères.



## *centennial plus one*

Quite a lively discussion developed around Ottawa regarding the continuation into 1968 of the special activities associated with centennial year. At one extreme were those who suggested that this was a glorious birthday party which we should remember, not try to repeat. At the other extreme were those who proposed that we carry on a further major programme of special national and local activities and ceremonies similar to those organized for 1967.

The desirable goal probably lies somewhere between these positions. We can not and should not try to create again the extensive public events of 1967. The ceremonies, the fun and the excitement were something rather special. We have proven to ourselves that we are not a race of dour frontiersmen; that we have a stimulating and diversified culture and an exciting national life; and that we love ceremonies and panoply, whether we are observers or participants, and whether the pomp and the parties take place in the plaza at Toronto City Hall or in the rural atmosphere of smaller villages and municipal communities. Nothing could equal Parliament Hill at midnight on June 30, 1967, yet I recall with equal pleasure several of the programmes which I attended in small spots in Leeds County.

We made a special effort to organize a number of programmes within the Department in 1967. In line with the spirit generated last year, we plan, without maintaining the same high pitch of excitement, to continue in 1968. Some of the marine agencies which did not find it possible to organize public Coast Guard Days last year, will have them this year; and we hope to hold a number of other "open house" events at various field operations. I hope all field personnel who feel that they can arrange to welcome some public visitors will do this in 1968 on their own initiative, quite apart from a number of proposals that we shall be making to you from headquarters.

## *au lendemain du centenaire*

Nous avons eu, à Ottawa, un débat très animé au sujet de la continuation en 1968 des manifestations spéciales entourant la célébration du Centenaire. D'une part, on alléguait que c'était là un magnifique banquet d'anniversaire dont nous devrions garder le souvenir sans chercher à le répéter; d'autre part, on proposait que nous devrions mettre en œuvre un autre programme important d'activités spéciales nationales et locales et de manifestations semblables à celles qui avaient été organisées pour 1967.

Le but à atteindre se situe probablement quelque part entre ces deux extrêmes. Nous ne sommes pas en mesure et nous ne devons pas tenter de recréer les manifestations publiques grandioses de 1967. Les manifestations, le plaisir et la ferveur étaient quelque peu spéciaux. Nous nous sommes prouvés à nous-mêmes que nous ne sommes pas une race d'austères broussards; que nous avons une culture stimulante et diverse et une vie nationale passionnante, et que nous aimions le cérémonial et le grand appareil, que nous soyons spectateurs ou figurants, et que le faste et les banquets aient lieu sur la place de l'hôtel de ville de Toronto ou dans le cadre rural des petits villages ou des petites municipalités. Rien ne pourrait se comparer au spectacle offert sur la colline du Parlement, à minuit, le 30 juin 1967; pourtant, je me rappelle avec un égal plaisir plusieurs des programmes auxquels j'ai assisté dans de petits endroits du comté de Leeds.

Nous avons fourni un effort spécial pour organiser en 1967 un certain nombre de programmes au sein du Ministère. Inspirés par l'ardeur suscitée l'an dernier, nous nous proposons, sans maintenir la même atmosphère fébrile, de poursuivre ce travail en 1968. Certaines des agences de la marine qui n'ont pas été en mesure, l'an dernier, d'organiser des journées publiques de la Garde côtière, les organiseront cette année. Nous comptons également organiser un certain nombre de manifestations publiques à divers postes locaux. J'espère que tous les employés de ces postes qui croient être en mesure d'accueillir le public visiteur le feront en 1968 de leur propre initiative, sans se limiter aux divers projets que nous, de l'Administration centrale, vous soumettrons.

*J. R. Baldwin*



# the search for a new symbol

In the January-February issue of "Transport," our Deputy Minister suggested that a new departmental symbol or insignia be created "which will be an indication of our activities and our purpose, both to the general public and to all members of the department."

What is wanted is a symbol of the kind used by Expo 67 and the Centennial Commission.

What is *not* wanted is a heraldic crest or a pictorial representation.

Ideas will be welcomed from everyone in the department with a creative urge to come up with a departmental symbol.

A cash prize has been established and a representative committee from headquarters is being set up.

## *General Information:*

Suggestions for a new symbol may be submitted by any D.O.T. employee.

The symbol chosen must be an original design suitable for use on departmental stationery, press releases, equipment, buildings, etc.

It must represent the Department of Transport, but not conflict with existing symbols or branch insignia.

The originator of the winning design will receive a cash prize of \$150.

Details of the contest and how designs should be submitted will be carried in the May/June edition of TRANSPORT.

The competition will be open until Oct. 1, 1968.

# concours pour le choix d'un symbole

Le sous-ministre des Transports, dans notre numéro de janvier-février, a proposé qu'on étudie la possibilité d'adopter un nouveau symbole ou insigne «qui soit un indice de nos activités et de notre but, tant aux yeux du public en général qu'à ceux de tous les membres du ministère».

Ce qu'on veut est un symbole, simple en soi, comme ceux, par exemple, qui ont été adoptés pour l'Expo et pour l'année du Centenaire.

Nous ne sommes pas en quête d'un emblème conçu selon les toutes dernières données de la science héraldique ni d'un dessin (semblable à celui qui paraît en couverture de notre revue) illustrant en détail l'activité du ministère.

Un comité est en voie de formation pour étudier les suggestions. Un prix en argent sera accordé au gagnant du concours.

## *Renseignements généraux:*

Le concours s'adresse à tous les employés du ministère des Transports. Le symbole choisi doit être un dessin original qu'on pourra utiliser sur la papeterie du ministère, les communiqués de presse ainsi que sur les édifices et tout autre équipement.

Il devra s'agir d'un symbole qui tient compte du rôle joué par le ministère dans son ensemble et qui ne vient pas en conflit avec d'autres symboles ou emblèmes utilisés par certains services du ministère.

La prime consentie au gagnant sera de l'ordre de \$150.

Des renseignements supplémentaires sur les «règles du jeu» et la façon de procéder pour soumettre vos suggestions seront donnés dans la prochaine livraison de «Transport».

Le concours prendra fin le 1<sup>er</sup> octobre 1968.

# computer meteorology: toward a better forecast

by Edouard Deslauriers  
Information Services Division

Jim Leaver, chief of the Meteorological Branch's Central Analysis Office at Dorval, Que., likes to compare his office's weather forecasts to a product that is "consumed" daily by its Canadian "customers".

To this end, Mr. Leaver is concerned that the product is produced as efficiently as possible so that it can keep abreast of the demands for more frequent and more accurate weather reports.

Enter the computer, the forecaster's number one 'tool' in the ceaseless task of gathering and analyzing Canada's weather.

In 1962, the CAO installed its first computer and put it to work. Five years later, the need for more computing speed and the need for a computer capable of handling more data made it obsolete.

The CAO's newest computer, now installed and working at Dorval, digests the information fed into it at least 10 times faster than the first and it is estimated that it handles 350,000 mathematical operations a second.

With the help of this computer, the Central Analysis Office can now forecast the weather three days in advance.

Through continuing experiments and research, the computer is being fed more and more information and it is hoped that within the next decade it may provide the weatherman with the data required to forecast the weather five days in advance.

All over the world, meteorologists have adopted the mathematical approach to the forecast problem and numerical weather prediction is now the order of the day.

Whereas, in the past, the weatherman would rely almost exclusively on his experience and knowledge to make weather forecasts, he now looks into the future with a new type of "crystal ball" which gives him a clearer picture of things to come.



**THE COMPUTER: VITAL AID TO FORECASTING**—A Department of Transport meteorologist, working towards his post-graduate degree, processes meteorological data at McGill University.

**LA CALCULATRICE: AIDE ESSENTIELLE À LA PRÉVISION**—Un météorologiste du ministère des Transports, poursuivant des études en vue d'obtenir un diplôme postuniversitaire, traite des données météorologiques à l'université McGill.

For many years, weather prediction services were almost entirely dependent upon the synoptic approach, supplemented by semi-objective techniques obtained from theoretical studies of dynamic meteorology.

In other words, the weatherman, with the help of synoptic models or weather maps depicting typical atmospheric situations, would make forecasts based on his experience and upon incomplete statistical analyses.

These were subjective techniques to which the forecaster applied his theories of dynamic meteorology.

Calculations such as those now made by the computer were originally initiated by meteorologists who realized many years ago that the mathematical approach to weather forecasting was the one most likely to provide long-range and more accurate findings.

Meteorologists also realized then that man himself could not possibly attempt to solve by hand the millions of calculations for the complex mathematical equations involved in the objective analysis of weather observation data. The time spent on calculations alone would have made a forecast impossible.



It is in fact estimated that 64,000 people working around the clock could hardly expect to achieve in one day what the computer is now doing in one set of operations.

Numerical weather prediction is defined as a technique utilizing numerical computations to predict the dynamic and thermodynamic evolution of the atmosphere.

Mr. Leaver, officer in charge of the Central Analysis Office, accompanied by the heads of the various units comprising CAO—Ralph Anderson (Analysis and Prognosis), D. E. McClellan (Extended Forecast), M. Kwizak (Operational Development and Evaluation) and J. Simla (Computing Services)—took us on a tour of the office, explaining how the technique is being applied here in Canada.

Mr. Leaver compares the CAO to the "basic manufacturer" whose product—in this case a weather forecast—is produced for consumption in Canada.

To produce its forecast, the CAO relies on information provided by a network of 2,500 surface weather observation stations and 700 upper air stations strategically located across the northern hemisphere.

The surface stations provide reports transmitted to CAO at regular six-hour intervals. The upper air stations are increasing their schedule of observations to four times daily with information bearing on pressure, temperature, wind and humidity.

Upper air stations gather their information with the help of weather balloons which reach levels up to 100,000 feet.

These balloons carry a package containing highly sensitive equipment to measure meteorological parameters in the atmosphere. This information is transmitted by radio to ground receiving stations and then relayed by teletype to CAO through the meteorological communications system.

Extraction of data, analysis and prediction are the three main functions performed at the Central Analysis Office.

All the coded reports received from the various observation stations must be systematically verified to ensure that the information accepted for further consideration in the processing cycle is free of errors.

Some 50 of the more than 72 available pieces of information are extracted from each station after verification and these constitute the data required for objective analysis.

It is estimated that the computer goes through about 50 million mathematical operations in the extraction of data alone.

The data is collected from the teletype

circuits by means of perforated paper tape. The information, thoroughly scrutinized with the help of a paper tape reader, is then transferred electronically to a magnetic tape, providing high-speed input to the "central processor."

The next phase of the process deals with data analysis and prediction. Here it is estimated that the number of mathematical operations involved may run to as high as 200 million, depending on the quantity of data fed into the computer.

The computer solves all these complex mathematical operations in a scant nine minutes.

The end result is a large weather map on which are charted the flow patterns in the upper atmosphere over the whole northern hemisphere. This provides the meteorologist with an over-all picture

of the situation and allows him to predict weather conditions 72 hours in advance.

Through the Central Analysis Office, sections of this large weather map containing data relevant to certain areas of Canada are then forwarded to the weather centrals, the "wholesalers," where more information of a regional nature is added before they are passed on to the "retailing outlets," the local weather offices across the country.

And so, finally, we the "consumer" are let in on the secret:

"A large high pressure area centred over the northern section of the country continues to give sunny skies over the central part of Canada. A light northerly flow of cool air continues to hold temperatures a few degrees below normal for this time of year . . ."



**GATHERING THE BASIC INFORMATION—**  
*Instructor shows student met. technicians how to use the instruments in a Stevenson Screen at the D.O.T. Air Services School at Ottawa International Airport.*

**CUEILLETTE DES INFORMATIONS DE BASE—**  
*Un instructeur enseigne à des techniciens stagiaires en météorologie la façon d'utiliser les instruments installés dans un abri Stevenson de l'École des Services de l'Air du ministère des Transports, à l'aéroport international d'Ottawa.*

# la machine écarte la conjecture des prévisions de la météo

par Edouard Deslauriers  
Services d'information

Il existe à Dorval, à quelques pas de l'aéroport international de Montréal, une petite «manufacture» inconnue de bien des gens, mais d'où sort cependant un produit de qualité exceptionnelle que plus de 20 millions de Canadiens dévorent en un rien de temps dès qu'il est mis sur le marché . . . et celà, quotidien-

nement. C'est un produit qui exerce en effet une telle influence sur le comportement de chacun de nous qu'on ne saurait s'en dispenser, pas même pour un jour.

Il s'agit, comme plusieurs l'ont sans doute deviné, des prévisions de la météo. Mais, d'où viennent ces prévisions? Comment les fait-on? Aujourd'hui, nos météorologistes peuvent prévoir le temps qu'il fera jusqu'à trois jours d'avance. Dans un avenir prochain, leurs prévisions pourront couvrir une période d'environ cinq jours.



ASSEMBLING THE FORECAST—Meteorologists at work in the forecast office, Montreal International Airport.

PRÉPARATION DES PRÉVISIONS—Météorologistes au travail, au bureau des prévisions de l'aéroport international de Montréal.

Au Canada, pays reconnu comme l'un de ceux qui, au cours des années, a le plus contribué à la recherche dans le domaine de la météorologie, nos méthodes de prévision du temps sont des plus avancées à l'heure actuelle.

Nos spécialistes à la Direction de la météorologie du ministère des Transports, gardant à l'œil les progrès technologiques dans le domaine des observations et des prévisions météorologiques, ont adopté et perfectionné de nouvelles techniques qui permettent aujourd'hui au Canada d'assumer un rôle de premier plan dans le cadre de la «veille météorologique mondiale» actuellement en voie d'organisation.

Depuis le commencement des temps, l'homme a cherché à comprendre, par tous les moyens à sa disposition, les processus dynamiques et physiques en cours dans l'atmosphère. Au cours des siècles, il a mis sur pied et développé diverses méthodes de prévision du temps.

Il y a quelques années, avec l'avènement de l'ère de l'automatisation, le météorologiste a enfin mis la main sur un instrument des plus précieux, soit la calculatrice. Grâce à cet instrument, on a espoir de pouvoir, dans un avenir prochain, prédire les changements de temps au moins cinq jours d'avance.

Une de ces calculatrices, conçue pour traiter les données d'observation du temps recueillies dans tout l'hémisphère nord, a été installée au Bureau central d'analyse du ministère des Transports à Dorval en 1962. Exploitée à son maximum, cette calculatrice a été récemment remplacée par une autre pouvant calculer plus rapidement et capable de traiter un plus grand nombre de données. Cette nouvelle calculatrice assimile les données qui lui sont fournies en un temps dix fois plus rapide que la première. On estime qu'elle peut faire 350,000 opérations mathématiques à la seconde.

Les météorologistes du monde entier ont aujourd'hui adopté la méthode mathématique pour résoudre le problème de la prévision. Alors que, dans le passé, le météorologiste comptait presque exclusivement sur son expérience et ses connaissances pour établir ses prévisions, il scrute maintenant l'avenir dans un nouveau genre de «boule de cristal» qui lui donne une vision plus nette des phénomènes futurs.

Autrefois, les services de prévision du temps avaient recours à la méthode synoptique, que l'on complétait par des techniques semi-objectives mises au point à la suite d'études de météorologie dynamique. En d'autres mots, le météorologiste, s'aidant de modèles synoptiques ou de cartes du temps représentant des situations atmosphériques typiques, faisait des prévisions basées sur son expérience et sur des analyses statistiques



incomplètes. Il s'agissait en fait de techniques subjectives auxquelles le prévisionniste appliquait ses théories de météorologie dynamique.

Des calculs comparables à ceux qu'effectuent nos calculatrices d'aujourd'hui ont d'abord été tentés par des météorologistes qui s'étaient déjà rendu compte, il y a plusieurs années, que l'application de la méthode mathématique au problème de la prévision du temps était de loin la plus apte à procurer des données à longue échéance et plus précises. On a vite réalisé cependant qu'il était impossible à l'homme seul de faire à la main les millions de calculs impliqués dans les équations mathématiques complexes que comportait cette méthode. Rien que le temps passé à faire les calculs aurait suffi à rendre impossible la prévision. On estime, en effet, que 64,000 personnes travaillant 24 heures sur 24 pourraient à peine espérer terminer en un jour ce que la calculatrice peut maintenant faire en une seule série d'opérations.

Dans le langage du météorologiste, on définit la prévision numérique du temps comme une technique utilisant des calculs numériques pour prévoir l'évolution dynamique et thermodynamique de l'atmosphère. Jim Leaver, responsable du Bureau central d'analyse de Dorval, accompagné des chefs des différents services formant le B.C.A., Ralph Anderson, (analyse et pronostic), D. E. McClellan (prévision à période prolongée), M. Kwizak (mise au point opérationnelle et évaluation), et J. Simla (services des calculs), nous a fait visiter le Bureau central d'analyse, nous expliquant comment cette technique est appliquée ici au Canada.

Pour effectuer ses prévisions, le B.C.A. reçoit des données d'un réseau composé de 2,500 stations d'observation météoro-

logique en surface et de 700 stations d'observation en altitude situées à des points stratégiques à travers l'hémisphère nord.

Les stations de surface transmettent des messages d'observation météorologique au Bureau central régulièrement, soit toutes les six heures. Les stations d'observation en altitude, de leur côté, envoient leurs données deux fois par jour. Dans certains cas, on essaie d'augmenter le nombre des observations à quatre par jour. Ces données portent sur la pression, la température, le vent et l'humidité.

Les stations d'observation en altitude obtiennent leurs données à l'aide de ballons météorologiques qui s'élèvent jusqu'à 100,000 pieds. Ces ballons sont munis de dispositifs très sensibles pour mesurer les paramètres météorologiques dans l'atmosphère. Les données sont transmises par radio à des stations réceptrices au sol, puis relayées par téléscripteur au B.C.A. grâce au système de communications météorologiques.

Les trois principales fonctions du Bureau central d'analyse sont l'extraction des données, l'analyse et la prévision. Tous les messages chiffrés que l'on reçoit des diverses stations d'observation doivent être systématiquement vérifiés; ceci, afin de s'assurer que tous les renseignements retenus pour étude ultérieure dans le cycle du traitement soient dignes de foi et exempts d'erreurs. Sur plus de soixante-douze pièces d'information fournies par chaque station, environ cinquante sont extraites après vérification, et celles-là seulement constituent les données dont on se sert pour l'analyse objective. On évalue à environ 50 millions le nombre des opérations mathématiques qu'effectue la calculatrice uniquement pour l'extraction des données.

On reçoit ces données par téléscripteur

sur ruban de papier perforé. La donnée, minutieusement examinée au moyen d'un lecteur de bande en papier, est alors transmise électroniquement à une bande magnétique avant d'être confiée à «l'ordinatrice centrale».

La phase suivante du processus consiste dans l'analyse des données et la prévision. Pour cette étape, on estime que le nombre des opérations mathématiques impliquées peut aller jusqu'à 200 millions, selon le nombre de données introduites dans la calculatrice.

Et la calculatrice effectuera toutes ces opérations mathématiques complexes en neuf minutes exactement!

Le résultat final du calcul est la production d'une grande carte du temps sur laquelle apparaissent les configurations de la circulation de l'air dans la haute atmosphère au-dessus de tout l'hémisphère nord. Grâce à cette carte, le météorologiste a en mains une bonne description de toute la situation et peut ainsi prévoir les conditions atmosphériques 72 heures à l'avance.

Des sections de cette grande carte comportant des données propres à certaines régions du Canada sont ensuite envoyées, par le Bureau central d'analyse, aux centres régionaux, qui y ajoutent un plus grand nombre de données de nature plutôt régionale.

Enfin, le produit fini nous est officiellement transmis dans une forme qui peut ressembler à ce qui suit: «Une grande zone de haute pression dont le centre est au-dessus de la partie nord du pays continuera de donner un ciel ensoleillé dans toute la partie centrale du Canada. Un léger courant d'air frais venant du nord maintient les températures à quelques degrés au-dessus de la normale pour cette période de l'année.» . . . ou encore, parfois: «Fuyez! Un ouragan approche!»

**THE "CUSTOMER"**—*This prairie farmer, like many other Canadians, depends on the long range and accurate forecast for information essential to his livelihood.*

**LE "CLIENT"**—*Ce cultivateur des Prairies, comme bien d'autres Canadiens, compte sur les prévisions à long terme et exactes qui lui fournissent des renseignements essentiels à son travail.*



# A LOCAL BOY WHO MADE GOOD

by Norman Avery

Tom Appleton Jr. is 26 years old and should be the envy of every red-blooded Canadian boy who hopes some day to be a pilot.

In the nine years since he first soloed at the Ottawa Flying Club, Tom has flown aero survey in hinterland Canada, Nigeria and the Ivory Coast and Surinam in South America.

Right now he is spending his honeymoon in Spain while on training duty with the Spanish air force for his employer, de Havilland Aircraft of Canada.

But before the starry-eyed potential pilot rushes out to join the so-called pilot shortage, he might heed the advice of the local boy who made good.

"Choose the company you want to work for," said Tom, "and then wash and gas airplanes until you work your way into the pilot's seat."

Tom is the son of Mr. and Mrs. Tom Appleton Sr., who are as deeply involved in sailing as their son is in flying.

Tom Sr., a well-known member of the D.O.T. staff currently writing a history of Marine Services for the department, is a former commodore of the Britannia Yacht Club in Ottawa.

Too many private pilots are disillusioned by the brick wall they hit when they start applying for jobs with a minimum of experience.

News of a pilot shortage often fails to mention that the situation is still mainly on paper and that the seasonal shortage now is for "qualified" pilots. And it is the qualifications that tend to keep sliding just beyond the reach of the candidate.

Tom Appleton has had his eye on the left seat of an interesting airplane for several years that I have known him. He



was one of two private pilots who braved the rigors of winter and an awkward radio in a J-3 Cub to build hours.

More squeamish and better-heeled pilots preferred the comfort of heat and push-button navigation, but hours were hours and the price was about half that of the more modern aircraft.

Within a year of those training days, Tom was flying an Aztec for Spartan Air Services in the Arctic. That was 1961 and he stayed for two years. In 1963 he joined Survair Limited for two years and flew survey in Africa.

With primitive aids to navigation and the demands of precision flying, the African scene is just about the ultimate in training grounds for the pilot who thinks he has learned everything. The same might be said for the rain forests of Surinam where Tom flew with Survair.

At this time he was described by his chief pilot as one of the company's greatest assets.

Nearly two years ago, Tom again picked his company and joined the flying staff of de Havilland demonstrating, in particular, the Twin Otter.

Last week, he was pacing the tarmac at Downsview waiting for the end of formalities of the official handover to the Spanish air force of the first six Caribou aircraft.

The next morning, he took command of the Caribou for the flight to Spain with a group of Spanish pilots. He will remain two months, checking out military pilots on the nimble transport plane.

His off-duty hours will be spent touring Spain with his bride of Dec. 16 who joined him after a visit in England. Tom met Heather Kilgour while he was demonstrating flying at Farnborough in 1966.

*Norman Avery is a freelance writer whose column "Aviation" appears weekly in The Ottawa Citizen.*



# the flying lab adds new dimension to teaching

by Bryan Goodyer

Information Services Division

The odd-looking four-engined DC-4 settled onto the runway in a perfect three-point landing, then taxied onto a parking apron just outside the offices of the Air Services Training School at Ottawa International Airport.

Inside, 11 students who, for the past two weeks, had been studying radar and avionics theory, threw on their overcoats and headed out across the tarmac to board the aircraft.

The plane, one of two leased by the Meteorological Branch of the Department of Transport from Kenting Aviation Limited of Toronto, was being temporarily used as a classroom while on a

routine patrol of the St. Lawrence Seaway.

A two-day layover at the school was arranged so the students could gain operational experience in the techniques of ice observing utilizing the sophisticated electronic equipment on board the aircraft.

"Flight training is playing an increasingly important part in the instruction given at the Air Services School," said A. A. (Art) Johnson, superintendent of the D.O.T. establishment which last year had more than 14,000 students enrolled in 98 courses.

Mr. Johnson said that the in-flight

training given to student air traffic controllers and radio operators is always one of the highlights of each course.

One of D.O.T.'s DC-3's, CF-DTB, has been specially equipped with a communications system which permits the students to tune in on all radio contacts made by the pilot with the various towers, ATC centres and radio range stations.

In addition, the instructor provides a running commentary throughout the flight. Students follow the flight's progress on charts and gain a good understanding of what is involved in flight operations.

The flight also shows them how important their roles are to aviation—roles that they will be playing soon in real life, as in-flight training takes place just before graduation.

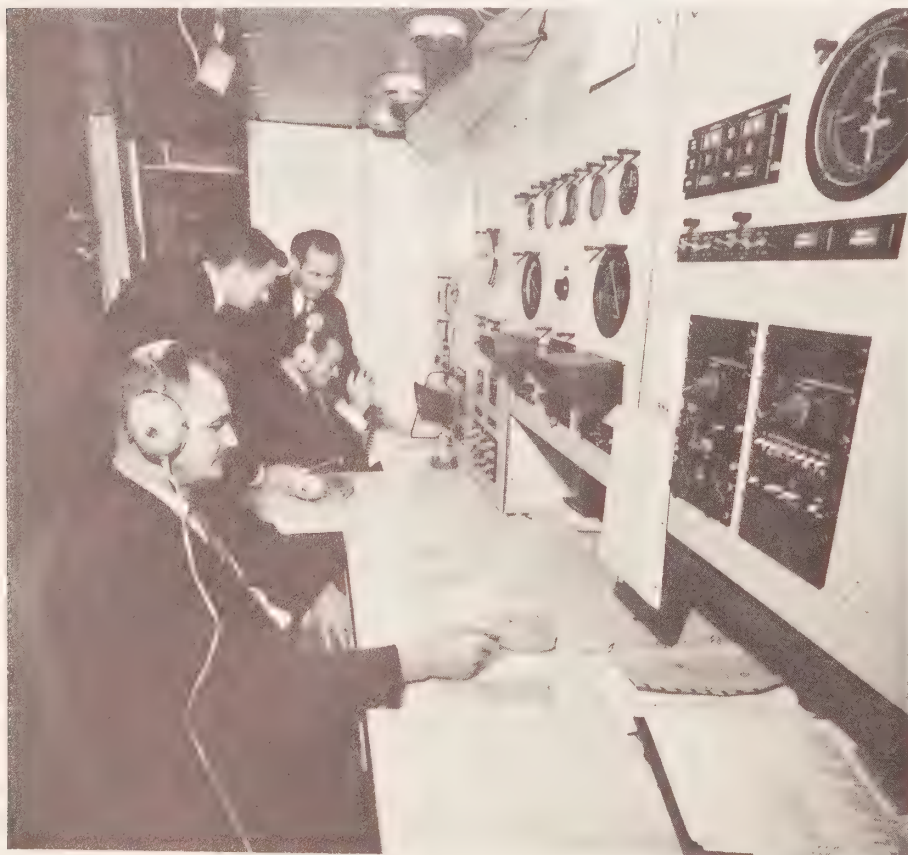
Some courses for electronics technicians also involve flying. The course in flight checking of navigational aids requires about one week of in-flight training in one of the specially-equipped "flying laboratories" used for checking the accuracy and reliability of the navigational facilities across the country.

Courses in maintenance and adjustment of navigational facilities such as ILS and VOR also require the use of aircraft for short periods while teaching certain techniques.

In the case of those taking the final phase of the ice-observing course, the chance to go up with the DC-4 under the supervision of the radar and navigation instructors means an opportunity to put the theory they learn in the classroom to work.

"This part of the training is designed to increase the ice observers' awareness of the capabilities and limitations of these electronic aids to ice reconnaissance," is the way Gerry Flucke, one of the three instructors who give the students ice observing theory explains it.

Gerry's lectures are backed up by those of Emil Stasyshyn, an instructor from the Met. Branch in Toronto who



Students learn the ropes.

has been involved with the ice observing course for the past nine years and Jacques Le May, an instructor with the Telecommunications and Electronics faculty of the Air Services School.

"The equipment aboard the ice observing planes is the most sophisticated ice reconnaissance system used anywhere in the world," explained one of the instructors as the trio explained the equipment and how it is used by the 20 trained ice observers who work for the Department of Transport.

The observation of ice on a large scale began in 1956 when the D.O.T. started training ice observers and began the job of providing information to shipping.

In 1966, a five-year contract worth \$5,000,000 was awarded to Kenting Aviation which supplies two DC-4 aircraft modified to carry close to \$500,000 worth of equipment used to plot the movement and location of ice on special charts for distribution to ships working in the Gulf, the Great Lakes or in the Arctic.

"This is actually the first course of this type," said Gerry Flucke, who explained that in future the operational flight experience would be the climax of 10 consecutive weeks of ice observing training.

The students will spend the initial two months of the course in Toronto and then take the final two weeks in Ottawa.

Why are the last two weeks given in Ottawa?

"We have the training facilities and staff here," replied one of the instructors, "and in addition can draw on the resources of other branches of the D.O.T. (Civil Aviation and Telecommunications and Electronics branches), Computing Devices of Canada and the Canadian Armed Forces (RCAF) in Ottawa.

The "average" ice observer, it was explained, stays on the job about two or three years and the position is often a steppingstone in the careers of meteorological technicians.

"Most of them, however, are in it because they like the work and the travel," said Gerry.

Outside on the parking apron, the students were giving the DC-4 the "once over."

Extensive modifications have given it a strange look. The forward portion of the fuselage is topped by a transparent oval-shaped dome canopy which shelters the main observing position.

Under the belly protrudes a large fibreglass "radome" which houses the radar antenna.

The metallic structure of the doppler radar aerial can be seen to the rear.

The interior bears little resemblance to that of a conventional airliner. Instead of neatly-aligned rows of seats, the

space is occupied by numerous cabinets housing what looks like an elaborate laboratory.

There is also office space, a galley and a rest area with bunks.

The storage area carries an impressive array of engineering tools and spare parts including one complete spare engine and a mountain of survival equipment and rations in case the aircraft should be forced down somewhere in the Arctic wasteland.

Right behind and above the pilots sits the principal visual ice observer. He is the key man and is responsible for mapping the ice as observed along the path followed by the aircraft.

His eyes must constantly scan the area around him while the plane is in flight, assessing such sea-ice features as coverage, size and individual pieces, age and topography.

The electronic and navigational console bears some similarity to those found in the control room of any radio broadcasting station. It is manned by the radar ice observer, a navigator and an avionics technician who also assists the navigator.

An overall precision navigation system provides a high degree of position accuracy, so necessary in the charting of ice conditions as well as enabling the aircraft to rendezvous with ships requiring tactical support.

Flights frequently are of long duration. Sorties of up to 12 hours are common and at certain seasons Arctic reconnaissance involving up to 20 hours of flying a day for three to five consecutive days have become routine.

Thus the job of ice observing is one that is becoming increasingly more important, not only in terms of the saving of precious time and money, but in the recruiting and training of qualified per-

sonnel in the Air Services school's flying classroom.

By this time, the students were aboard the aircraft meeting the navigator, the avionics technician, and the ice observer who would familiarize them with the plane's equipment, so that they would be ready for the two operational flights planned for the next day which would give them a chance to use this equipment operationally.

"It's great," said Denis Blanchard of Montreal when asked about his job. "I wouldn't trade it for anything."

"I like it very much," added Jack Power, a native Newfoundlander who now makes his home in Toronto. "It gives you the chance to travel and do things the average guy will never do."

Jack, prior to his appointment to the ice observing course, was a member of the crew of the Canadian Coast Guard Ship *John A. Macdonald* when it made an historic voyage through the Northwest Passage late last year and went to the aid of a crippled United States Coast Guard cutter stranded deep in the polar ice pack at the top of the world.

It was under these conditions that Jack was called upon to put his training and experience to work as the ship picked its way through the treacherous ice.

"It was pretty grim for a while but we hung on and finally got a lucky break when the wind shifted," Jack recalled.

Up front the students were being called to attention by their instructors. The time had come to get down to specifics in preparation for the flights the following day.

"Let's call this class to order," said one of the instructors as he moved to the front of what must be one of the most unusual classrooms in Canada.



*Ice observers at work.*



# QUAND LES GLACES S'EN MÈLENT

Presque toute la flotte de brise-glace du ministère des Transports a été mobilisée, en janvier dernier, pour briser les embâcles créés dans le fleuve Saint-Laurent par suite d'une vague de froid intense exceptionnellement longue. En tout, neuf brise-glace de la Garde Côtière ont lutté d'arrache-pied contre les glaces pendant au moins trois semaines avant de réussir enfin à dégager complètement le chenal maritime depuis Québec jusqu'à Montréal. Jamais avait-on vu un tel déploiement de brise-glace à l'œuvre dans cette seule section du fleuve.

Pendant les mois d'hiver, nos brise-glace patrouillent constamment le chenal maritime précisément pour empêcher la formation de ces embâcles, principale cause d'inondation des terres basses, particulièrement aux environs des îles de Sorel. En temps normal, deux ou trois navires peuvent suffire à cette tâche dans la section du fleuve s'étendant entre Trois-Rivières et Montréal.

Cette année cependant, face à une situation pour le moins exceptionnelle, il a fallu faire appel à neuf brise-glace, dont deux, le «*John A. Macdonald*» et le «*d'Iberville*», sont les plus lourds de la flotte actuellement. Les autres navires déployés pour mener à bonne fin l'opération «déglaçage» étaient le «*N. B. McLean*», le «*Ernest Lapointe*», le «*Wolfe*», le «*Montcalm*», le «*J. E. Bernier*», le «*Labrador*» et le «*Simon Fraser*».



1

Après avoir d'abord brisé l'embâcle au pont de Québec, les navires ont remonté le fleuve en bousculant la glace sur leur passage jusque dans le port de Montréal.

Dans la photo 1, trois brise-glace, le «*John A. Macdonald*», à gauche, le «*d'Iberville*», au centre, et le «*J. E. Bernier*», à l'arrière-plan, s'attaquent à l'embâcle aux environs de Québec.

La photo 2, prise du pont du «*John A. Macdonald*», fait voir le champ de glace qu'il faut franchir. Le capitaine Wilfrid Dufour, à gauche dans la photo 3, analyse d'un air inquiet la situation

à laquelle il doit faire face. Il paraît à bord du «*d'Iberville*» en compagnie d'un pilote dont les services sont requis pour la navigation dans le fleuve.

Dans la photo 4, le «*John A. Macdonald*» fonce dans un champ de glace. A l'arrière-plan, on voit le pont de Québec.

A bord du «*d'Iberville*», dans la photo 5, un opérateur radio demeure en contact avec les autres navires de la flotte et transmet au centre de contrôle de la navigation, à Québec, les derniers développements dans la lutte contre les glaces.





4

5

## BATTLING THE BIG FREEZE

The big job began after an exceptionally long cold spell last January turned the St. Lawrence River into a 200-mile ice jam between Quebec City and Montreal.

Since the ice is the principal cause of flooding in the lower regions of the river, particularly around the Sorel Islands, the St. Lawrence is usually patrolled constantly by ships of the Canadian Coast Guard.

This year, however, it took nine icebreakers of the D.O.T. fleet about three weeks to clear the channel from Quebec to Montreal.

Led by the icebreakers *John A. Macdonald* and *d'Iberville*, largest of the present fleet, the nine ships included the *N. B. McLean*, *Ernest Lapointe*, *Wolfe*, *Montcalm*, *J. E. Bernier*, *Labrador* and *Simon Fraser*.

In photo 1, the *John A.*, left, the *d'Iberville*, centre, and the *J. E. Bernier*, right, tackle the big jam head on near the outskirts of Quebec City.

Photo 2, taken from the bridge of the *John A.* shows the solid icefield facing the ship.

Captain Wilfrid Dufour (photo 3) and a river pilot watch closely as the *d'Iberville* moves into the ice pack.

In photo 4, the *John A. Macdonald* crunches into the ice just west of the Quebec bridge (background).

In photo 5, Emile Bonneau, chief radio officer aboard the *d'Iberville*, maintains contact with the other ships and with the navigation control centre at Quebec to keep officials informed of the latest developments in the battle against the ice.







**LIGHTING UP AN ISLAND**—Photo far left shows East Ironbound Island as seen from the air. Left, CCGS Mink proceeds toward the island as crew lays the cable. Lower left, Sid Forward, base electrician, prepares a splice in the 7,200-volt cable. Fourth photo shows the 100-year old lighthouse, the ubiquitous hydro pole behind it signifying the last step in connecting the station to mainland electricity.

## submarine cable brings power to tiny island

by B. M. Williams  
Assistant District Engineer  
Department of Transport  
Marine Services Base  
Dartmouth, N.S.

Four miles off the Nova Scotia mainland and 20 miles east of Captain Kidd's treasure pit, Oak Island, lies East Ironbound Island.

The island, so named because its high cliffs are stained red from iron deposits in the rock, is populated by nine families of hearty Lunenburg-Dutch fishermen that include a D.O.T. lightkeeper, his wife and son.

All year long the men of the island fish together, splitting their profits equally.

In winter and spring, they catch lobster and mackerel while, during the summer, cod and pollock are caught with set nets. In the fall, herring is the catch.

The men are good fishermen and have

equipped their island homes with all the most modern conveniences. In addition, each family has its own wharf at New Harbour on the mainland equipped with a garage containing a late model car.

The island children are taught in a one-room school from grade one to grade nine. Their education is completed on the mainland where they board in Chester and return home for the holidays.

Cattle and chickens provide the island with its milk and eggs. Gardens provide all the vegetables needed with special emphasis put on cabbage and Bluenose potatoes. The island is famous for its sauerkraut, locally called "kraut" and for its salt herring with blue potatoes.

The only thing lacking on the island was electric power and here is where the Department of Transport came in.

The first light was installed on the island 100 years ago and has operated continuously ever since without electric power.

Then late last year, Lightkeeper Charles Finck, a native of the island and a fulltime fisherman, was notified that plans were underway to install a fog alarm on the island.

To operate the alarm, a source of electric power was needed and so it was decided that a submarine cable would be installed to carry the power lines to East Ironbound.

The planning of the operation was spread over many weeks. This was our second major submarine cable job, the first having been Cape Negro Island, and therefore a lot of the planning and special equipment used at East Ironbound was developed on the Cape Negro job.

The cable-laying operation started at first light around 6 a.m. and the D.O.T. crew aboard the Canadian Coast Guard Ship *Mink* commanded by Captain T. M. Hicks had finished by 9 p.m. of the same day.

The cost of the job was about \$20,000, not including the ship's time for a 7,200 volt cable connecting East Ironbound with the mainland.

And so the benefits of electricity came as a sort of Centennial gift to the people of East Ironbound Island who had for years depended on small 2.5 kilowatt generators to light their homes, oil furnaces for heat and kerosene-powered refrigerators to keep their food.



# FLORIDA ON \$3.80 A DAY

Jean Choquette, a 19-year-old personnel clerk at headquarters, knows a lot about transportation.

As a reporter who met him in Florida this winter wrote: "Jean will probably go back to Canada and write a book called 'How to see the U.S.A. on \$3.80 a day, including transportation.'"

It all started when Jean found he had 11 days of his annual vacation coming to him. The sum total of his resources, however, was only "about 42 dollars."

Then, just before two of the girls in the office, Lise Mallette, 21, and Nicole Laviolette, 19, left for Florida by jet Jean jokingly said he'd meet them there.

"Well, the more everybody in the office kidded me about it, the more I decided to go," said Jean.

The young adventurer left Ottawa, hitchhiked to Toronto and then to Hamilton where, after a short delay, he succeeded in getting a ride with a Florida-bound produce truck.

"I slept sitting up and lived on four hamburgers a day, but I made it," recalled Jean. "Although I had to unload part of the truck's cargo in Philadelphia as part of the trip, I made it to Miami on \$15."

The trip down took three and one-half days (through 10 inches of snow and a temperature of 15 degrees at one spot) over a distance of 2,000 miles.

"The girls were sure surprised to see me, though," laughed Jean. "They couldn't get over it."

Coming back after spending the better part of a week in Florida where, incidentally, he has never been before, Jean took a bus to Pompano Beach near Fort Lauderdale where he met a Montreal-bound truck driver who was unloading his truck at the Farmers Market.

"From there, I got a ride all the way to Montreal," said Jean.

"The only hard part of the trip was getting a ride from Montreal to Ottawa," he said. "I finally had to give up and take the bus."

And what does he plan to do with his vacation next year?

"I'm going to try to make Germany next summer," replied Jean. "You see, I'm going to hitchhike to Montreal and work my way over on a ship, then..."



## EN FLORIDE SUR UN BUDGET DE \$3.80 PAR JOUR

Il va sans dire, Jean Choquette, un de nos commis aux Services du personnel à Ottawa, s'y connaît en matière de transport. Un journaliste qui l'a rencontré en Floride cet hiver disait à son sujet: «A son retour au Canada, Jean écrira probablement un volume sur les moyens de visiter les États-Unis sur un budget de \$3.80 par jour, y compris les frais de voyage.»

Notre histoire remonte à quelques mois lorsque Jean, qui est âgé de 19 ans, apprit que deux compagnes de travail, Lise Mallette, 21 ans, et Nicole Laviolette, 19 ans, s'apprêtaient à s'envoler pour des vacances en Floride. «Je vous reverrai là-bas!», dit-il en plaisantant.

Jean, certes, n'était pas sérieux, mais ses confrères au bureau l'ont tout de même pris au mot et n'ont cessé de le taquiner jusqu'au jour où il a enfin décidé de faire le voyage, coûte que coûte.

Avec onze jours de vacances et \$42 en poche, il entreprend la première étape de son voyage, sur le pousse, d'Ottawa à

Toronto et, de là, à Hamilton. Ici, il rencontre un camionneur qui le conduira jusqu'en Floride.

De Hamilton à Miami, avec un bref arrêt à Philadelphie où l'on décharge une partie de la cargaison à bord du camion, le voyage dure près de quatre jours. «J'ai dormi, assis, rappelle Jean, et je me suis nourri de «hamburgs» pendant quatre jours.» A son arrivée à Miami, il restait \$27 dans ses goussets.

«J'ai tenu promesse, dit-il. J'ai vu Lise et Nicole..... Elles n'en revenaient pas.»

Après avoir passé près d'une semaine en Floride, Jean entreprend le voyage de retour. Un autobus le conduit à Pompano Beach, près de Fort Lauderdale. Là, il rencontre un autre camionneur qui le ramène jusqu'à Montréal.

«C'est aussi simple que cela, précise Jean. Le seul obstacle sur mon trajet, c'est à Montréal que je l'ai rencontré. Je n'ai tout simplement pas réussi à dénicher une âme charitable pour me conduire à Ottawa et j'ai dû me résigner à prendre l'autobus.»





# breaking new ground

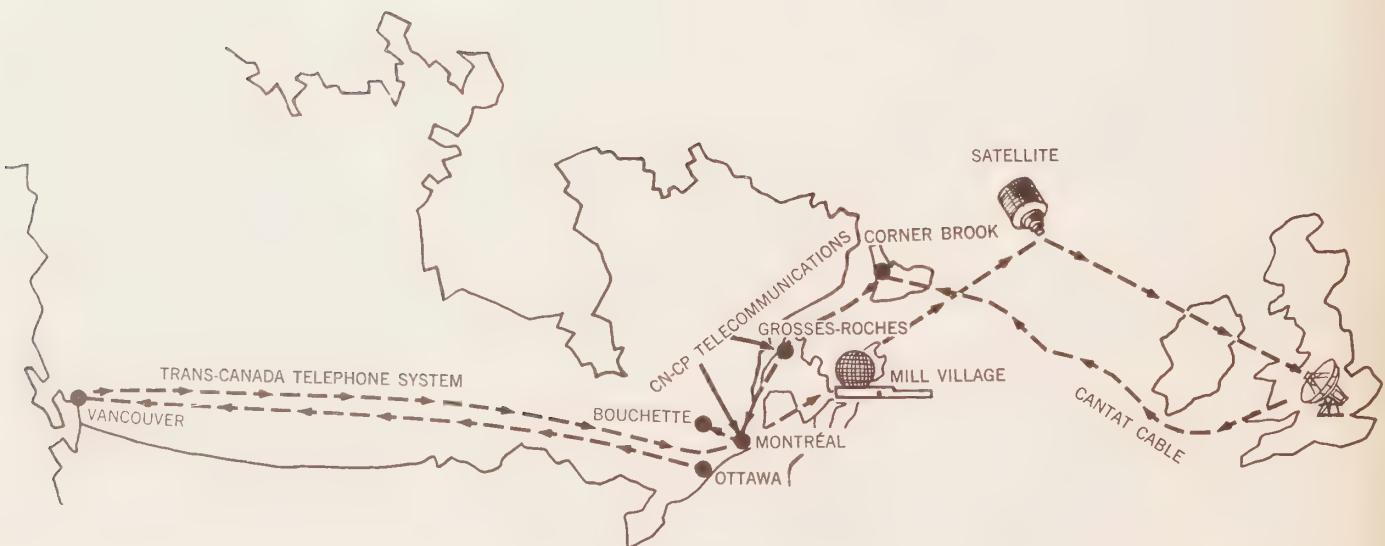
A first step toward the creation of a domestic satellite communications system was taken recently when Transport Minister Paul Hellyer, in an Ottawa ceremony, flashed a coded signal over a 55,000-mile circuit to detonate an explosion in Bouchette, Que., 70 miles away.

The blast marked the ground-breaking for an experimental satellite communications earth station being built by Bell Canada Limited for completion in mid-1968.

The earth station is being built to test the use of communications satellites to provide telephone, live television and other telecommunications services to Canada's far north.

Photos show the ceremony (guests saw the blast on closed circuit television), the route taken by the coded signal, a model of the station and an artist's conception of what it will look like when completed.

## BOUCHETTE GROUND-BREAKING CEREMONY ROUTE OF DETONATION SIGNAL



# innovation

Au cours d'une cérémonie qui a eu lieu récemment à Ottawa, le ministre des Transports, M. Paul Hellyer, a envoyé un signal codé sur un circuit de 55,000 milles pour déclencher une explosion à Bouchette (Qué.) à 70 milles de la capitale, ce qui marque un premier pas vers la création d'un réseau national de communication par satellite.

L'explosion inaugurerait la construction par la compagnie de téléphone Bell du Canada Limitée d'une station terrienne expérimentale de communication par satellite qui est censée être terminée au milieu de l'année 1968.

La compagnie construit cette station terrienne dans le but d'effectuer des essais d'utilisation de satellites de communications pour assurer au Grand Nord canadien des services de téléphone, de télévision en direct et d'autres services de télécommunications.

Les photos représentent la cérémonie (au cours de laquelle les invités ont vu l'explosion grâce à un circuit fermé de télévision), la route suivie par le signal codé, une maquette de la station et une conception artistique de l'aspect que prendra la station une fois terminée.





# appointments

## research

Raymond R. Cope, 37, director of the Transportation Policy and Research Branch, has been appointed a member of the Canadian Transport Commission by Governor-in-Council.

As a commissioner, Mr. Cope will, under the supervision of the president of the CTC, organize and direct the development of the facilities and program of research within the broad field of transportation in Canada.

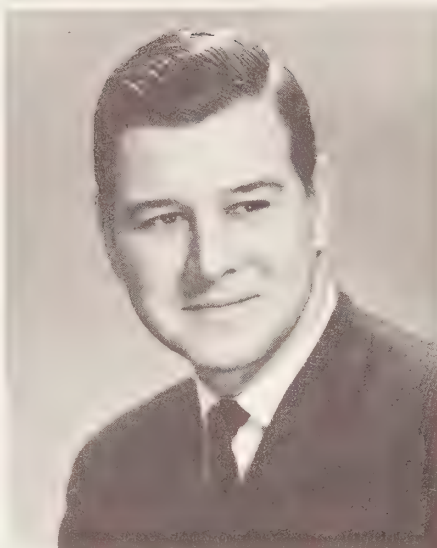
Mr. Cope was appointed director of transportation policy and research on Feb. 25, 1966.

Previous to that, he had been on loan from Canadian National Railways since 1964 and occupied the post of director of the Railway and Highway Branch of the department.

A native of Vancouver, B.C., Mr. Cope graduated from the University of British Columbia in 1953 with a Bachelor of Science degree in mechanical engineering. He also took post-graduate studies in economics at McGill University.

From 1953 to 1964, he was engaged in research and development with the CNR and was associated with Canadian National Hotels.

Mr. Cope is vice-president of public

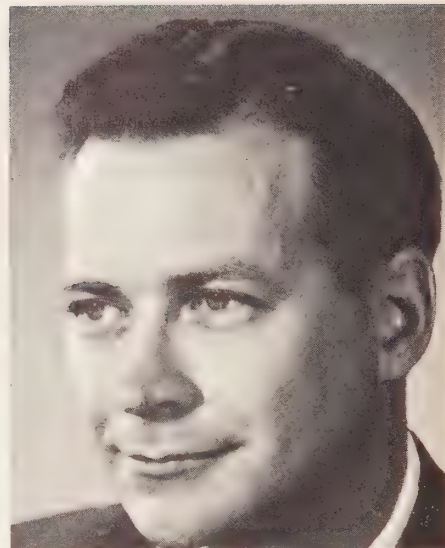


R. R. Cope

relations for the Transportation Research Forum, a past president of the Canadian Transportation Research Forum and a member of the Engineering Institute of Canada. He is married and has two children.

Mr. Cope will be succeeded as director of transportation policy and research by E. Lorne Hewson, 43, formerly general superintendent of transportation with the Canadian National Railways' Atlantic region.

Mr. Hewson, a native of Kamloops, B.C., is a graduate of the University of



E. L. Hewson

British Columbia where he obtained his Bachelor of Science degree in mathematics and physics.

He joined the CNR in British Columbia in 1943 and served in various capacities until 1956 when he came to Eastern Canada as a research analyst in CN's research and development branch in Montreal.

Married and the father of two sons, Mr. Hewson is a member of Rotary International, the Canadian Railway Club and is active in the Boy Scout movement.



Capt. Williams

## district manager at Saint John

Captain Guy James Michael Williams assumed his new appointment as district manager of the Marine Services' base at Saint John, N.B., late last year.

Capt. Williams has filled the vacancy created by the promotion of the base's former district manager, Captain E. O. Ormsby, now district manager at Dartmouth, N.S.

Formerly supervisor of pilots at Hali-

fax, Capt. Williams, who is 44 years of age, is married and has three children.

A native of Ostrea Lake, N.S., he entered the government service in 1941 as a seaman on board the Canadian Government Ship *Lady Laurier* and rose to become master of the Canadian Coast Guard ships *Bernier* and *Edward Cornwallis* prior to his promotion to supervisor of pilots at Halifax.

## **new position**

Melvin Garfield Hagglund, 49, former deputy superintendent of the strategic plans and policies forecast division of the Met. Branch, is now at work at his new appointment as chief of airports planning and research.

In this position, a new one which comes under the office of Eric Winsor, director of the Airports and Field Operations Branch, Mr. Hagglund will be responsible for the planning of airport ground facilities and services.

He will also be responsible for maintaining liaison with other branches, other departments, outside agencies and the aviation industry in the co-ordination of plans.

A native of Beatty, Sask., Mr. Hagglund served more than four years with the Royal Canadian Air Force as a navigator both in Canada and overseas during the Second World War.

He graduated from the University of

British Columbia in 1949 and from the University of Toronto in 1950 with an M.A. in physics (meteorology).

In June 1950, Mr. Hagglund joined the Met. Branch as a duty forecaster in Edmonton where he spent four years that included a one-year tour of duty as officer in charge of the weather station at Resolute Bay, N.W.T.

Other appointments included a posting as superintendent of Arctic meteorology in the basic weather division at Met. headquarters in Toronto and service on loan to the Royal Canadian Navy and the Canadian Army where he served in Dartmouth and Halifax, N.S., aboard H.M.C.S. *Magnificent* and at Army headquarters in Ottawa.

A member of the Canadian Meteorological Society and the Professional Institute of the Public Service of Canada, Mr. Hagglund is married and has three children.



*M.G. Hagglund*

## **telecom advisory bureau adds two new members**

Two more members recently appointed to the Government Telecommunications Policy and Administration Bureau have assumed their new appointments in Ottawa.

The two are J. R. Marchand, 37, and E. R. Bushfield, 44.

Mr. Marchand, who has had wide experience in the international telecom-

munications field in Canada and served as executive secretary of the world-wide Interim Communications Satellite Committee in Washington before coming to the Capital, is now head of the bureau's international division.

Mr. Bushfield, who has extensive knowledge of industry in Canada both in private industry and lately as a division

chief in the Department of Industry, heads the bureau's national policy division.

In his new position, Mr. Marchand is co-ordinating plans for international telecommunications conferences and meetings which involve the bureau, the government and Canadian industry.

Mr. Bushfield's division is responsible for formulating and recommending domestic telecommunications policies for Canada.

A native of St. Boniface, Man., Mr. Marchand was educated at the University of Manitoba.

After serving in the Royal Canadian Air Force and with the Manitoba Telephone System, he joined the Department of National Defence.

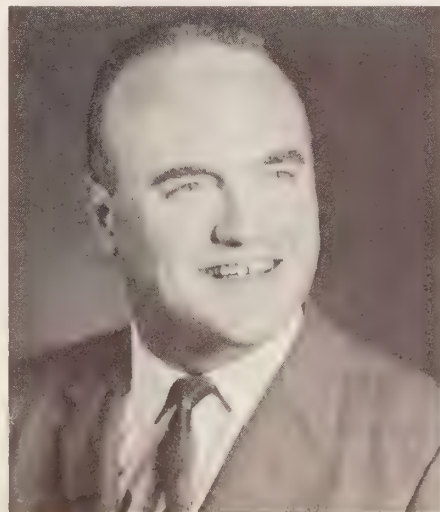
He subsequently transferred to the radio regulations division of the Department of Transport where he served until his appointment to the ICSC in August 1965.

Mr. Bushfield holds degrees from the University of British Columbia and from the University of Toronto.

A registered professional engineer in the province of Ontario and a member of the Engineering Institute of Canada, he is married and has three children.



*J.R. Marchand*



*E.R. Bushfield*



# À LA RETRAITE

## Georges Gaudreau

D'ici quelques mois, un personnage en vue dans les milieux de la navigation au pays, le capitaine Georges-Édouard Gaudreau, agent régional des Services de la marine du ministère des Transports à Québec, prendra officiellement sa retraite après avoir passé plus de 40 ans de sa vie dans les services maritimes de son pays.

Né à L'Islet, au Québec, le 22 décembre 1908, Georges, fils de cultivateur, est le plus jeune d'une famille de 12 enfants. Ses frères, pour la plupart, ont trouvé carrières dans des disciplines s'apparentant aux choses de la terre, soit comme ingénieur forestier, arpenteur ou dans des sciences connexes. D'autres, comme leur père, sont demeurés cultivateurs. Une sœur, aujourd'hui décédée, s'est faite religieuse et est devenue Supérieure générale des Ursulines à Québec.

Georges, semble-t-il, est le seul de la famille qui ait eu un penchant pour les choses de la mer. Sa fille unique, Marjolaine, est aujourd'hui biologiste. Elle a épousé Jean-Pierre Bohémier, technicien et professeur en électronique de Shawinigan.

Avant tout de même de se faire matelot, Georges, tout comme ses frères, allait connaître la vie de collège. Après ses études primaires à L'Islet, il entreprend son cours classique au Juniorat du Sacré-Cœur d'Ottawa. Cependant, à cause de son état de santé, il se voit obligé d'abandonner ses études à l'âge de 17 ans. Il venait de terminer sa première année de philosophie.

En avril 1927, il monte à bord de son premier navire, le «Nayarit», de Clarke Steamship. Ainsi débute sa carrière de matelot. En 1928, il passe au service de Canada Steamship Lines et navigue sur les Grands Lacs. Dès septembre de la même année, il commence son entraînement au long cours à bord des navires de Canadian National Steamship et d'Imperial Oil. Quelques années plus tard, soit en 1934, à l'âge de 25 ans, il décroche son certificat de «capitaine côtier».

En 1936, il épouse Alida Bélanger et, la même année, il assume son premier poste de commande à bord du «G.T.D.», navire d'une nouvelle compagnie, la «Davie Transportation» qui se charge du transport du papier à journal entre Trois-Rivières, Gatineau, Québec et New York.

Lorsque la guerre éclate, en 1939, Georges devient 1<sup>er</sup> officier à bord des navires-citernes de Panama Transport. Ces navires font la navette entre les

ports de l'Amérique du Sud, de la France et de l'Angleterre.

Un an plus tard, quand la France tombe aux mains des Allemands, Georges quitte les pétroliers pour passer au service de la Marine de guerre. Il devient officier de navigation à bord de la première corvette canadienne construite pour l'Amirauté. En 1941, il prend le commandement de cette corvette, le «Trillium». Ce navire servira d'escorte aux convois de l'Atlantique-Nord, empruntant la route entre l'Islande, l'Irlande et Terre-Neuve. Georges participera ainsi à quelque cinquante traversées de l'Atlantique. Il demeure à ce poste jusqu'en 1943 alors qu'on lui confie la responsabilité d'organiser les convois du Saint-Laurent. Il dirigera ces opérations de la base navale de Rimouski.

En 1945, lorsque la guerre prend fin, il passe au service du ministère fédéral des Transports à titre d'inspecteur des bâtiments du Saint-Laurent. En 1947, il devient surintendant des phares à l'Agence de la marine du ministère à Québec, et, en 1951, il est nommé agent régional des Services de la marine, poste qu'il occupera jusqu'au moment de sa retraite.

Le capitaine Georges-E. Gaudreau, récipiendaire de la Médaille du Centenaire, a également été maintes fois décoré pendant les années de la guerre. Il possède en effet au moins cinq médailles qui lui ont été décernées pour services rendus au cours du dernier conflit mondial.

Le capitaine Gaudreau termine une carrière bien remplie. Il se propose, avec son épouse, de voyager... par mer, il va sans dire, mais comme touriste cette fois et non comme capitaine de navire.



## C. C. Warkentin

Cornelius ("Cornie") Warkentin, senior inspector of meteorology for the Winnipeg region, has retired after 27 years of service with the Meteorological Branch.

Mr. Warkentin was born in Russia and came to Canada in 1923. He graduated from the University of Manitoba with a Master of Science degree.

Following a tour of duty as a lecturer, he joined the Met. Branch in 1940 as an instructor. Eleven years later, he was appointed senior meteorological inspector for the region, the position he held until his retirement.

A luncheon sponsored by Winnipeg colleagues was held last November to honor Mr. and Mrs. Warkentin at which an attache case and travelling bag were presented to the couple by D. M. Robertson, regional meteorologist.

Among special guests at the affair was D. C. Archibald, chief of the basic weather division at Met. headquarters in Toronto.

Mr. and Mrs. Warkentin plan to remain in Winnipeg although they do have some travelling scheduled to visit members of their family in Europe and Africa.

## Mrs. C. E. Fancy

Mrs. C. E. Fancy, a veteran of more than 21 years of government service, has retired from the Purchasing Branch of the Department of Transport.

Mrs. Fancy was treated to a small reception attended by close to 50 members of the branch as well as her son and several close friends.

The well-known typist, who is active in several ladies groups in the city of Ottawa and plans to take advantage of her retirement leave for a Florida vacation, was presented with a watch by J. A. Saint-Laurent, chief of purchases and contracts, as a going-away gift from her friends and fellow workers.

In addition to various other gifts presented individually by friends and staff, she also received a cake made in the form of a typewriter.

## H. E. Davenport

Harold E. Davenport, regional airworthiness inspector for the Edmonton region, has retired after 20 years of service with the Department of Transport.

Mr. and Mrs. Davenport were guests of honor at a retirement dinner held at the R.C.A.F.A. (700) Wing, Edmonton, late last year.

About 110 friends from the aviation community attended the dinner.

Gordon Cameron, former commissioner for the Yukon Territory, provided an excellent commentary as master of ceremonies, while Jack McClure, acting on behalf of the regional controller of civil aviation, presented gifts to Mr. and Mrs. Davenport.

Mr. Davenport began his aviation career at Jericho Beach Air Force Station, B.C., in the spring of 1923.

From 1926 to 1936, he engaged in civil aircraft maintenance engineering on the west coast and from 1936 to 1947, his aviation activities were centered principally in Whitehorse and later Edmonton.

He joined the Department of Transport in Edmonton in August of 1947 as an airworthiness inspector.

The Davenports have moved to a relaxing English-style cottage on Shuswap Lake near Sorrento, B.C.

## Ivan C. Milne

Ivan Courtney Milne, a principal clerk in the cargo section of Marine Services, has retired from the Department of Transport after 10 years of service.

Born near Fairfax, Man., Mr. Milne was educated in Saskatchewan where he taught school for a time.

From 1928 to 1940, he was a member of the Saskatchewan Civil Service. In 1940, he joined the Royal Canadian Air Force and served 14 years in Ottawa before retiring on Jan. 9, 1954.

From the air force, he went to the Joint Intelligence Bureau of the Defence Research Board and, in 1957, to the Department of Transport.

Mr. Milne and his wife, Mary, who have three children, capped Centennial year with the publication of a 31-page booklet which traces the Milne family tree back over the past 100 years.

Entitled "John George Milne and his descendants," the booklet was put together in about two months and published last December.

## Ralph Bunt

A man who started out as a ship's radio operator and spent 37 years "interfering with interference" as a radio inspector has retired from the Department of Transport.

For Ralph Bunt, the early part of his government service was high adventure.

In 1926 he was radio operator aboard a revenue cutter engaged in trying to break up the lucrative, private foreign aid program of supplying rum to thirsty, prohibition-bound Americans.

There were storms which he recalls with no pleasure—one blanketed everything so heavily with ice that he barely managed to get a radio signal which helped the skipper find his bearings.

Nor did he get much pleasure when the customs officers seized \$40,000 in contraband rum hidden under a dock: the entire load "except for a few bottles that may have been quietly set aside" was poured down the drain.

Next, he went as a radio operator with the Hudson Straits expedition which in 1927 began a study of ice formation and other conditions in the area.



Mr. and Mrs. Bunt and W.A. Caton

## Hayward Mercer

An upholsterer/carpenter with the Department of Transport at Gander International Airport has retired after more than 20 years of service.

At a gathering in his honor, Hayward Mercer was presented with numerous gifts and received the fond wishes of his friends and co-workers for a happy retirement.

Mr. and Mrs. Mercer have taken up residence in Bay Roberts.

## J. P. Brooman

J. P. (Jack) Brooman has retired from the Telecommunications Systems Laboratory after more than 42 years of government service.

Mr. Brooman and his wife were honored at a reception at the Clark Memorial Centre in Ottawa where fellow employees presented Mr. Brooman with a gold watch and a photo of the TSL staff, and his wife with a travelling case.

"I started out in radio working after school and for a full year in a radio store in Oakville, Ont.," recalls Mr. Brooman. "We made everything then, including condensers, tube sockets and resistors; building radios was not just assembly."

"Anyway," he continued, "wireless was the big thing then so I took a course in operating and in 1925 joined the old Department of Marine and Fisheries at the ripe age of 17 years."

"I think I was the youngest operator in the service for nearly a year. I served my time on the old Lurcher Lightship with the old half-kilowatt spark transmitter and converted crystal receiver, and on the Canadian Ice Patrol with the Canadian Government Ship *Mikula*."

"We were working 56 hours a week on the coast stations then and six on and 12 off for 11 months straight could get a little tiring at times," said Mr. Brooman. "One of the compensations was that we were living in prohibition days yet we could buy rum for \$25 a five-gallon keg delivered."

"In 1927/28, I spent a year at Belle Isle that was one of the toughest years in the department, I think. Isolation was isolation then. We ran short of food, one operator got beri beri and another anaemia and the cook was sick so all told it was a bad year."

"Incidentally, the operator who relieved me that year died at Belle Isle and they had his body packed in ice for about three months before they could get it off."

"After that, I spent most of my time at Chebucto Head and Camperdown until 1938 when I was transferred to Ottawa after Air Services was set up," recalled Mr. Brooman. "I worked for about four years on installations and finally settled down in the Test Room (now the TSL) where I remained until I retired."



# TRANS-CANADA

## His 75th Donation

Ottawa—Herbert L. Land, acting director of the Marine Hydraulics Branch, recently made his 75th donation of blood at a Red Cross blood donor clinic held in the Capital.

The 65-year-old Mr. Land, who plans to retire Sept. 30, says he will likely make "one or two donations" before retiring.

Mr. Land, chief of the St. Lawrence Ship Channel division since 1958, is acting for Don Ripley, now completing a year-long total immersion course in French at Quebec City.

## Drama at Baker Lake

Baker Lake, N.W.T.—The weather at this northern D.O.T. outpost, located 400 miles north of Churchill, Man., was not unusual for the time of year as Met. Technician Jack Hilton went about the business of making an upper air observation early one morning.

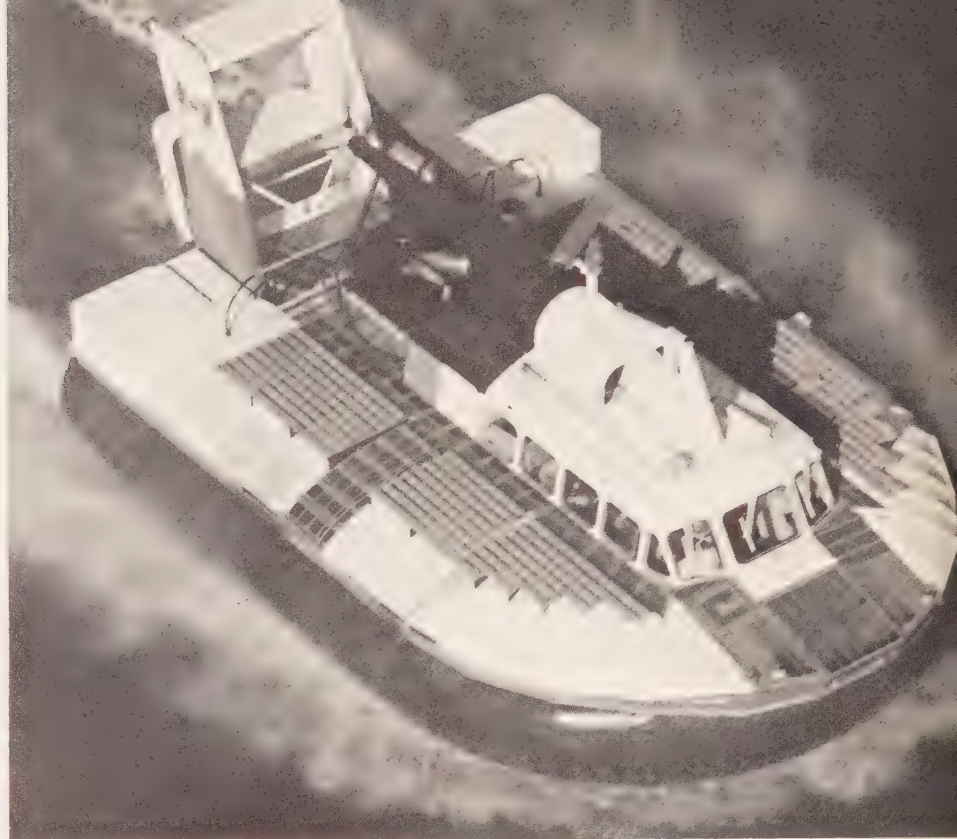
He had risen at 4 a.m. to complete his task. By 8 a.m. he was nearly through.

His weather report showed a layer of cloud covering 70 per cent of the sky about 2,000 feet above ground level, the visibility was good, the temperature was 30 degrees above zero and a north-west wind of 23 miles per hour was gusting to 30.

As he went about his work, he noted and watched with interest as a float-equipped Cessna 185 taxied into the lake in preparation for take-off.

Suddenly, while swinging into the wind, the craft was hit by a strong gust of wind and one wing tip went under.

Realizing the seriousness of the situation, Jack shouted for his co-worker, Met. Technician Marvin Steer. Together they dashed the 200 feet from the weather office to the lake shore, launched a 20-foot canoe equipped with a 10 horsepower outboard engine and set out



**NEWEST ADDITION TO COAST GUARD—**A British-built Hovercraft, similar to the one shown above, will formally join the fleet of the Canadian Coast Guard this summer following operational and operator-training trials in the Vancouver area.

The SRN-5 (the craft shown is a Bell SK-5) was bought from the British Hovercraft Corporation at a cost of about \$490,000. This figure includes the cost of fitting the Hovercraft out as required for search and rescue duty, spare parts, electronic equipment and a hangar.

The craft is to be based in the Vancouver area where a heavy density of pleasure and commercial boating traffic will provide ample opportunity for the gaining of operational experience.

for the ill-fated plane, a distance of two to three-hundred yards.

By the time the pair reached the aircraft, it had overturned. Three of the four occupants were clinging to the pontoons. A fourth occupant had jumped into the frigid lake as the plane had overturned and was drowned.

The two rescuers pulled the shocked survivors into the canoe and took them to safety while waiting for help to arrive to find the missing man and recover the aircraft.

It was a day that the two technicians noted in their records as far from routine!

**NOUVELLE ACQUISITION DE LA GARDE CÔTIÈRE—**Un hydroglisseur (hovercraft) de fabrication britannique, semblable à celui qu'on voit dans cette photo, passera au service de la Garde côtière canadienne au cours de l'été prochain après avoir subi des essais dans la région de Vancouver. L'achat du SRN-5 au prix d'environ \$490,000 a été conclu avec la British Hovercraft Corporation. Ce montant englobe les frais d'équipement de l'appareil en vue des opérations de recherche et de sauvetage ainsi que l'achat des pièces de rechange, le matériel électronique et l'aménagement d'un hangar. L'hovercraft aura son point d'attache dans la région de Vancouver où la forte concentration des embarcations commerciales et de plaisance fournira de nombreuses occasions d'acquérir de l'expérience opérationnelle. C'est en se basant sur cette expérience que le ministère décidera s'il y a lieu d'utiliser des appareils du genre dans les autres régions du pays.

## Suggestion Winner

Ottawa—A suggestion that resulted in the use of what was thought to be rejected meteorological material has won a \$15 suggestion award for a D.O.T. employee.

D. W. J. Challis, a meteorological technician at Fort Churchill, Man., was granted the award after his suggestion was found to be an improvement in meteorological operations.

## Salute to Flight at Gander

*Gander, Nfld.*—The unveiling of the Atlantic Ferry Memorial and the official opening of the Conquest of the Atlantic Museum here recently have established Gander's position in the history of aviation in Canada.

The Atlantic Ferry Memorial, a Lockheed Hudson bomber mounted on a black pedestal (see photo), was unveiled by Air Marshal Donald Clifford Tyndall Bennett, a retired Royal Air Force officer.

The memorial commemorates Nov. 10, 1940, when Air Marshal Bennett, then a captain, departed Gander at 2230 hours GMT in a prototype of the aircraft used to create the memorial.

Capt. Bennett led a flight of six other Hudsons and landed at Aldergrove, England, on Nov. 11, after 11 hours and 12 minutes in flight to make the first delivery of an aircraft to Britain across the North Atlantic during the Second World War.

The mounted aircraft, which was donated by Kenting Aviation of Oshawa, was obtained by a memorial committee headed by Jack James, airport manager at Gander International Airport.

Following the dedication of the Atlantic Ferry Memorial, the party, which included several federal and provincial officials, moved to the international terminal building where the first of three stages of the Conquest of the Atlantic Museum was opened.

The air museum was established at Gander through the efforts of Newfoundland Premier J. R. Smallwood and J. W. Pickersgill, former federal Minister of Transport and now president of the Canadian Transport Commission.

## Gander se souvient

*Gander, Nfld.*—Le 10 novembre 1940, à 10h. 30 en soirée, un officier de l'ARC, le capitaine Donald Clifford Tyndall Bennett, aujourd'hui maréchal de l'Air à sa retraite, décollait de la base aérienne de Gander, Terre-Neuve, à bord d'un Lockheed Hudson, premier bombardier à être livré par voie des airs depuis le continent nord-américain jusqu'en Angleterre. La traversée de l'Atlantique-Nord s'est effectuée en 11 heures et douze minutes. Le capitaine Bennett dirigeait en cette occasion un groupe de sept bombardiers qu'on allait livrer à Aldergrove, en Angleterre. Pour commémorer l'événement, on vient d'ériger à Gander un monument approprié. Il s'agit en fait d'une réplique du bombardier Hudson montée sur un piédestal fait de pierres. C'est le maréchal de l'air Bennett qui a lui-même dévoilé le monument au cours d'une cérémonie marquant à la même

occasion l'inauguration officielle du Musée de la conquête de l'Atlantique. L'appareil servant de monument est un don de Kenting Aviation d'Oshawa. Il a été obtenu grâce aux efforts déployés par un comité dirigé par M. Jack James, administrateur de l'aéroport international de Gander. Le musée de l'Air, de son côté, est dû à l'initiative du premier ministre de Terre-Neuve, M. J. R. Smallwood, et de l'ancien ministre des Transports, M. J. W. Pickersgill, maintenant président de la Commission canadienne des transports.

## "Hay for Honey"

Horses still have a place in our operations, says the Victoria Marine Agency Newsletter.

Proof of this came to light last fall when the agency made arrangements for the repair of the old lighthouse at Pilot Bay on Kootenay Lake.

Situated about two hundred and fifty feet above the lake on a steep wooded hill, the lighthouse is reached only by a winding footpath.

Transportation of lumber and construction materials to the site presented a bit of a problem to the foreman. However, being experienced with that part of the country, he overcame the difficulties, best told in his own words:

"Dear Sir. While employed by your department as foreman to repair pilot bay light house, I had to employ A horse to yard the material half A mile up to the sight the horses name is honey this may seem like so much trivia but its the quickest way to explaine the situation.

"Honey arrived on the job and in due course was hitched to A stone boat with a load of singles piled there on it but Honey wasnt having any of it Honey kick up his heels bit at his would be drivers then sat down, So I went and dug Honeys boss out whosename is Topsy she got out in front and said come on Honey up tht hill went Honey.

"That is how I come to have one old widow on the pay roll. I agreed to give Topsy and Honey one hours traveling time. As they have they have quite ahike to work I hope this meets with your approval. please dispatch check with utmost speed as Honey needs hay."

## Paperwork Honor

W. S. Ryan, a member of the staff of the radio regulations division of the Telecommunications and Electronics Branch, has been granted a Canadian Government Paperwork Management award.

The award was announced by D. A. Charbonneau, co-ordinator of the program and chairman of the Ottawa chapter of the Administrative Management Society.

The certificate presented to Mr. Ryan cites him for "outstanding performance in promoting effective paperwork management in the Department of Transport."

Announcement of the award was made in a letter from Mr. Charbonneau to J. R. Baldwin, deputy minister of the department.

The actual award was presented at the annual meeting of the society, held in the Chateau Laurier Hotel in Ottawa.



Atlantic Ferry Memorial



# Transport

## ALBUM

### des Transports



CCGS *J. E. Bernier* is an icebreaking lighthouse supply and buoy tender officially accepted for service at the Quebec Marine Agency on Nov. 29, 1967. In addition to her duties in home waters, the Bernier will be used in support of resupply operations in the Arctic.

LENGTH: 231 feet

BREADTH: 49 feet

DRAFT: 16 feet

POWER: Diesel, 4,250 horsepower

GROSS TONNAGE: 3,070 tons

Le n.g.c.c. *J. E. Bernier*, nouveau brise-glace baliseur, est attaché à l'Agence de la marine du ministère à Québec. Le navire, qui servira au ravitaillement des phares et à l'entretien des bouées, a été officiellement reçu des constructeurs le 29 novembre 1967.

LONGUEUR: 231 pieds

LARGEUR: 49 pieds

TIRANT D'EAU: 16 pieds

PUISSANCE: diesel, 4,250 cv

JAUGE BRUTE: 3,070 tonneaux

# TRANSPORT

MAI-JUIN • 1968 • MAY-JUNE



# CANADA

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**Editor** Bryan R. Goodyer  
**Rédacteur français** Edouard Deslauriers

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## au secours!...

Au cours des quelques dernières années, vous avez certes noté les efforts déployés ici pour rendre notre revue aussi bilingue que possible.

Nous avons même changé son nom afin de la rendre encore plus conforme à nos aspirations. Notre but est bien évident. On veut en faire une revue entièrement bilingue.

Pour atteindre cet objectif, il nous faut la collaboration entière de nos lecteurs de langue française. Trop souvent—et c'est le cas dans le numéro actuel—nous nous voyons obligés d'accepter des traductions ou des adaptations de textes anglais pour publication dans la revue. Ce dédoublement de l'information dans un même numéro nous paraît inacceptable. Nous voulons plutôt vous présenter une revue renfermant des articles qui revêtent un caractère d'exclusivité, dans les deux langues. A cette fin, nous avons besoin de votre appui, de vos idées, de vos suggestions.

Soumettez-nous des articles... On les publiera s'ils sont acceptables. Si vous êtes au courant d'un événement quelconque qui pourrait faire l'objet d'un article, n'hésitez pas à nous le signaler. On se chargera de recueillir les renseignements et d'en faire la rédaction.

A juste titre, vous réclamez plus de français dans nos publications. Nous sommes d'accord. Mettons donc l'épaule à la roue. Si chacun y met du sien, nous aurons une revue qui sera lue avec intérêt et qui fera l'orgueil du ministère.

*La rédaction*

## OUR COVER

A mobile air traffic control tower, the first of six built by Canadair Limited for the Department of Transport, directs an aircraft toward a safe landing.

The mobile tower, built to D.O.T. specifications at a contract price of \$25,000, was accepted in April by R. W. Dodd, chief of the air traffic control division, from where it was sent to Ottawa to be radio-equipped. Delivery of the five others is expected by mid-June.

The towers will be used to provide tower control to serve airports where unusually heavy traffic develops over a short period of time, for air shows and displays, and also for use in an emergency, should normal facilities break down.

(Photo by Andre Sima)

## FRONTISPICE

Grâce à ces tours montées sur camion, le ministère des Transports est maintenant en mesure de déplacer avec aise ses services de contrôle de la circulation aérienne d'un bout à l'autre du pays. Ces tours mobiles, au nombre de six, sont destinées aux divers centres régionaux des Services de l'Air, soit Toronto, Montréal, Moncton, Winnipeg, Edmonton et Vancouver. Elles ont été construites par Canadair Limited.

Ces tours, munies des installations électroniques les plus modernes, peuvent être dépêchées en toute hâte aux aéroports réclamant les services de contrôle de la circulation, soit comme mesure d'urgence ou pour tout autre motif. Ainsi, on s'en sert, par exemple, aux aéroports où la circulation est particulièrement dense durant certaines périodes de l'année ainsi qu'à l'occasion de spectacles aériens et autres événements du genre. Elles seront surtout utiles en cas de panne des services à un aéroport et durant des travaux de réfection à une tour de contrôle existante.



## say what you mean

I return to an old theme: clear and concise expression. Most letters and reports could be substantially shorter without loss of significant content. In daily conversation whenever we offer lengthy comment, some of us hesitate, repeat ourselves or use unnecessary words and phrases to keep mental and vocal activity in parallel tempo. Too many of us transfer this habit to our writing. This makes it more difficult for the reader to understand and demands greater reading time.

Recently, a letter arrived on my desk which began with this sentence: "The draft agreement which you were good enough to append as an attachment to your letter is acceptable to the Department and as a consequence of collaboration, the same may be said on behalf of the corporation." It would have been much easier to say: "The draft agreement in your letter is acceptable to us and to the corporation".

To give another example, one paragraph of a report I have commences: "Productivity improvement could be accomplished by stimulating production". This sentence is unnecessary because it is without meaning. It is like saying "black is black".

Unnecessary elaborate sentences or phrases do not add to literary merit and are often an example of confused or hasty thinking and composition. The colorful passage and the flake of humor are helpful if used sparingly, although their employment demands skill. All of us who have the responsibility for preparation of written material should make it short, simple and clear. You will help the reader; you will help the Department; you will help yourself.

## ne tournez pas autour du pot....

Je reviens à une vieille rengaine: le choix de l'expression claire et concise. La majorité des lettres et des rapports pourraient être raccourcis sans pour autant perdre des éléments importants. Dans la conversation de tous les jours, en faisant de longs commentaires certains hésitent, se répètent ou utilisent des mots ou des phrases qui ne sont pas nécessaires uniquement afin de faire travailler leur cerveau et leur voix à l'unisson. Pour beaucoup d'entre nous, cette habitude raparaît dès que nous écrivons. Une telle habitude rend plus difficile au lecteur la compréhension du texte et demande un temps de lecture plus long.

Hier, j'ai reçu une lettre commençant par la phrase suivante: «Le projet de convention que vous avez eu l'amabilité de nous envoyer comme pièce jointe à votre lettre, rencontre l'approbation du Ministère et par voie de collaboration, rencontre aussi l'approbation de la compagnie.» Il aurait pourtant été beaucoup plus simple de dire: «Le projet de convention qui accompagnait votre lettre rencontre notre approbation et celle de la compagnie».

Autre exemple: voici le début d'un paragraphe d'un rapport que j'ai en main: «L'augmentation de la productivité peut être atteinte en améliorant le rendement». Cette phrase n'est pas nécessaire car elle est vide de sens. Cela revient à dire «noir est noir».

Les mots et les phrases compliqués et inutiles n'ajoutent rien à la valeur littéraire du texte et dénotent souvent un état d'esprit confus et une rédaction précipitée. Les propos humoristiques qui émaillent certaines phrases sont utiles pourvu qu'on les utilise avec modération, mais ils exigent une certaine habileté. Tous ceux qui sont chargés de la préparation de textes, doivent s'assurer qu'ils soient courts, simples et clairs. Ce faisant, ils rendront service aux lecteurs, au ministère et à eux-mêmes.

*J. R. Baldwin*

Deputy Minister

Sous-ministre



# THE ICE THAT FOULS THE FALLS

by William Dunstan  
*Information Services Division*



Legend has it that on March 30, 1848, ice blocked the lower end of Lake Erie so completely that the Niagara River dried up and water ceased to cascade over the great falls. While there is some doubt that the river dried up completely, it is an undisputed fact that the flow was drastically reduced. The public was fascinated and many walked along the top of the falls, picking up cannon balls and other souvenirs, before the ice dam broke.

Since the river began producing electrical power, however, large-scale formation of ice has been anything but a happy occasion. The river is the greatest single power source in the world, pulsating electricity into some of the largest industrial and residential communities on the continent. Problems due to icing can cut heavily into the power output, which in Canada alone is valued at approximately \$5,000 an hour.

The river is under international control, with the Ontario Hydro Commission and the New York Power Authority joining forces to implement the international agreement.

Howard Ferguson of the hydrometeorology section of Met is working with the Ontario Hydro Commission to establish an "energy budget" on the river: in general terms, this is a study of the heat gained and lost by the river and the attendant formation and dissipation of ice.

Until recent years much of the ice drifted into the river from Lake Erie, which freezes over almost completely in a cold

winter. An ice boom now has been installed at the lower end of the lake and this has drastically reduced the movement of ice into the river.

However, ice from other sources still is found in enormous quantities. Water in the shallow, fast-flowing river becomes super-cooled in winter and a crystalline type of ice known as "frazil" ice develops in the water. This adheres to obstructions on the river bottom and builds up on sluice gates and water intakes. Pan ice may form along the river shore and then break off to float downstream, often made slushy by snow which falls frequently over the area. A phenomenon common to shallow rivers of this type is the formation of anchor ice on the bottom during cold nights. This latter can act as a dam, reducing the flow by as much as 30,000 cubic feet per second. That is roughly a hundred times the flow of water consumed by a city of a million people.

Under the international treaty, a minimum flow of 50,000 cubic feet per second must be allowed to go over the falls for the scenic effect. The rest may be used for power. In winter, the mandatory flow is approximately 30 per cent of the total.

This flow usually is adequate to float the ice over the falls. Sometimes more water is needed, however, and it is necessary to divert some of the water which ordinarily would be used for power. The result sometimes is a drastic reduction of power for a relatively short period.

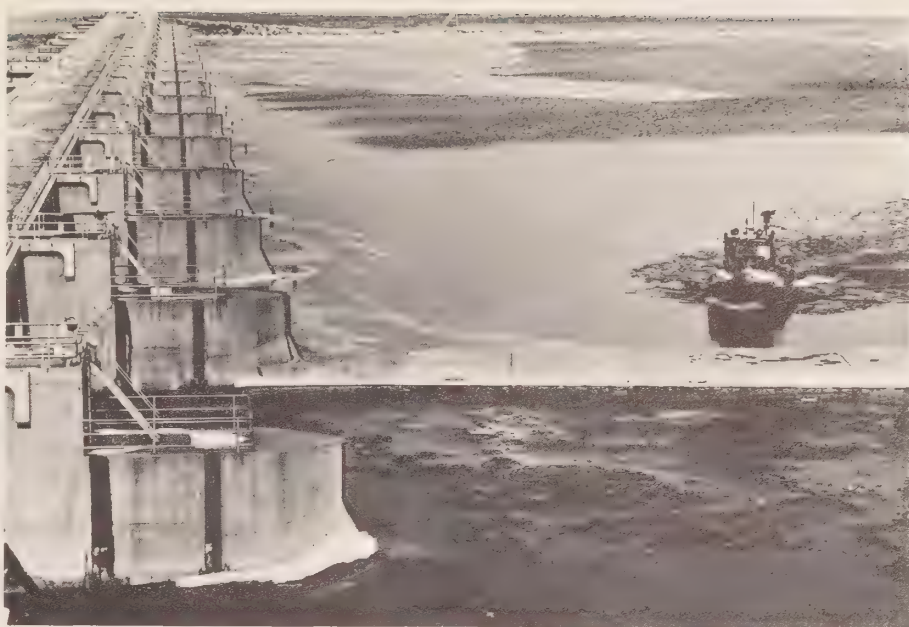
Two small icebreakers and control gates help keep the ice broken up and moving. If icing conditions could be forecast more accurately, however, action could be planned to combat the particular type of icing anticipated.

That's where Howard and his staff come in. A number of instruments record such things as net radiation, fluctuations in air and water temperatures and wind velocity. Readings are taken by Hydro technicians, who also have their own instruments, lookouts and a helicopter for keeping tab on water levels, ice cover, and other pertinent factors.

The records are assessed by Howard and his fellow scientists, who work out complex equations to demonstrate the energy gained and lost under various conditions. A general equation for the energy balance is:  $Q_n - Q_e - Q_h - Q_m + Q_i = Q_t$ , where  $Q_n$  = net incoming radiation;  $Q_e$  = net energy loss by evaporation;  $Q_h$  = net conduction of sensible heat to the atmosphere;  $Q_m$  = energy lost by snowmelt;  $Q_i$  = energy represented by the river inflow,  $Q_o$  = river outflow energy, and  $Q_t$  = net gain in energy storage.

See?

Approximately 550 man-hours were spent by Met staff in installing the instruments. One of the technicians, usually Bob Chapil, visits the sites about once a month. He spends some 12 hours each



*Above the falls, Ontario Hydro's powerful little icebreaker churns toward the control dam.*

*Met's Howard Ferguson inspects a net radiometer that is installed above the river at the control dam. Raised and lowered by a winch, the instrument measures the energy radiated from the river's surface.*





time, checking, repairing and replacing instruments. Meteorological officer Howard Cork and technician John Hebgin spend about 56 man-hours a month processing data.

This involves checking chart traces, "scaling" the charts to obtain values of the physical variables, tabulating and interpreting results and preparing statistical summaries. Howard Ferguson and Howard Cork spend an additional 25 man-hours a month evaluating energy balance factors, relating the results to the formation and dissipation of ice, attending project meetings, providing consultation to Ontario Hydro and writing reports and papers.

Results of the study are potentially extremely valuable. Improvements in ice forecasting can lead to more efficient power generation operations, for plans could then be made to cope with the conditions anticipated. Potential economic benefits of such improvements would be

in the range of tens of thousands of dollars a year in Canada alone.

The results also will be of immediate practical interest in many regions of the world including Russia, Iceland, Scandinavia and the northern United States. Aside from the economic factor, such studies contribute to the International Hydrologic Decade (IHD) effort to improve man's knowledge of his water resources, and the physical processes which affect them.

More than 90 countries are participating in IHD, which was launched in 1965 by a number of United Nations agencies.

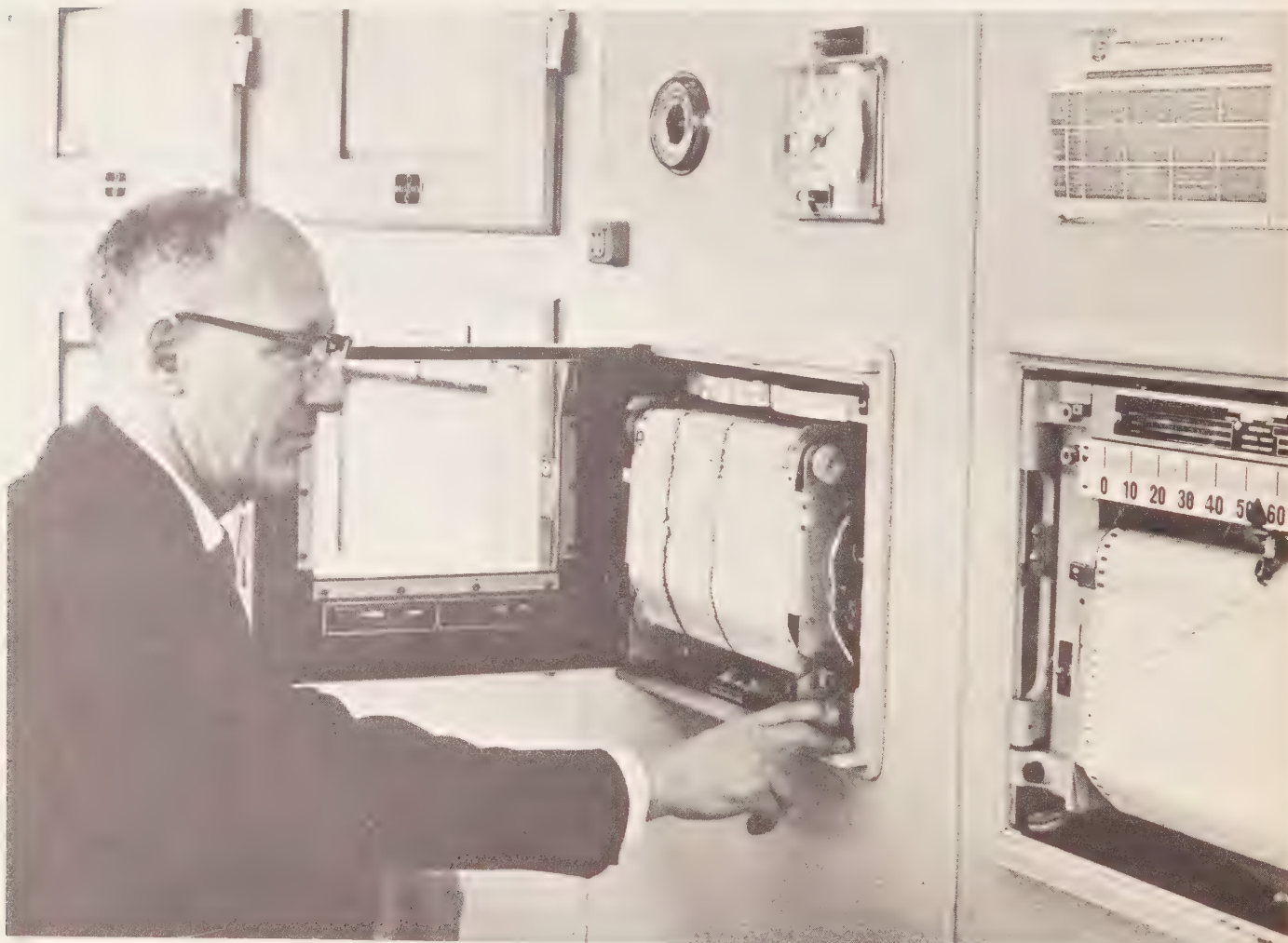
The Canadian contribution involves the concerted efforts of scientists from all provincial and federal water agencies and most major universities and other technical specialists working in hydrology or related fields.

Met's 40-odd IHD research studies, in addition to the Niagara River project, include a study of the use of weather

satellite data for determining surface snow or ice cover, a study of the effects of mountainous terrain on precipitation in British Columbia, an investigation into the potential effects of tree harvesting in Alberta's Rocky Mountains for increasing water yield for the Canadian Prairies, and intensive studies of evaporation near Chalk River, Ontario.

A major effort now planned is the International Field Year on the Great Lakes, an IHD study period of 18 months starting in 1970.

Nor is this all. Met is deeply involved in other international activities aimed at helping the world to improve its management of our two most precious resources—air and water. Met and similar bodies in other countries are working to co-ordinate efforts for such activities as the World Weather Watch, the Global Atmospheric Research Program and, of course, the International Hydrological Decade, for the maximum benefit of all.



*Ontario Hydro engineer Stan Pitt, at the instrument control console in the control dam office, examines the anemometer traces showing wind speed and direction. Other dials and tracing instruments record changes all along the river.*

# Mais comment sort-on d'ici?

Adaptation d'un article soumis  
par P. R. M. Toomey,  
Premier officier à bord du n.g.c.c. «C. D. Howe»

Par un jeu de circonstances qui m'est encore inconnu, j'ai été choisi récemment par mes supérieurs pour assister au Salon nautique national de Montréal à titre de préposé au kiosque du ministère aménagé dans le cadre de cette exposition annuelle.

N'ayant jamais été invité à remplir de telles fonctions, j'entrevois la chose tout de même comme une expérience qui me serait sans doute fort profitable, mais je ne savais trop évidemment à quoi m'attendre.

Ma tâche principale devait consister en la diffusion d'une documentation écrite portant sur la sécurité sur l'eau, sur les divers règlements s'appliquant à la navigation, sur la Garde côtière et sur ses services. Et aussi, évidemment, je devais m'attendre à répondre aux questions du public sur le fonctionnement du ministère en général.

A notre kiosque, outre moi-même de la Garde côtière, il y avait un représentant de la Gendarmerie royale ainsi que des spécialistes des services de la marine, de la division des règlements de la radio, de l'inspection des navires à vapeur, du service des recherches et de sauvetage et d'autres services relevant du ministère.

Nous formions, en quelque sorte, une équipe de guerriers qui avait peine à contenir l'attaque des fervents du yachting qui, pour un bon nombre, étaient plus intéressés à nous transmettre leurs propres connaissances qu'à apprendre du nouveau sur le sujet. Il y avait évidemment un bon nombre aussi de visiteurs sérieux en quête de renseignements qui leur seraient utiles. Ceux-là, il nous faisait plaisir de les accueillir et de s'entretenir avec eux.

Je ne saurais dire combien de gens ont visité l'exposition, mais je pense pouvoir affirmer, sans trop me tromper, qu'environ un visiteur sur cinquante a passé la dernière année, soit depuis la tenue du Salon nautique de 1967, à concevoir un tas de questions étonnantes, étranges et même compromettantes dans le seul espoir sans doute de nous embêter le plus possible.

J'énumère ci-dessous un échantillonnage de ces questions, en résumé bien entendu, et non nécessairement dans les termes précis de nos interlocuteurs. De même, mes réponses ne sont pas toutes nécessairement celles que j'ai données, mais, dans la plupart des cas, c'est le genre de réponses que j'aurais aimé fournir si j'avais eu le temps d'y penser. Au lecteur de juger quelles réponses semblent

les plus plausibles, mais j'affirme cependant que chacune des questions m'a bel et bien été posée.

*Interlocuteur:* Pourquoi la Garde côtière canadienne est-elle nécessaire quand on peut avoir recours aux services de la Garde côtière américaine au besoin?

*Réponse:* Impossible de répondre en quelques mots, mais ce pourrait faire le sujet d'une intéressante causerie de quelque quatre heures si vous étiez intéressé à nous revenir après l'exposition.

*Interlocuteur:* Existe-t-il un règlement interdisant d'attacher un moteur de 88 chevaux-vapeur à une petite embarcation de neuf pieds?

*Réponse:* Ça va tout de même à l'encontre de toutes les données du principe d'Archimède.

*Interlocuteur:* Où puis-je me procurer une carte marine du lac Keegan?

*Réponse:* Où se trouve ce lac?

*Interlocuteur:* Dans le parc au bout de la rue où je demeure.

*Réponse:* Consultez alors votre comité local de la récréation et des parcs.

*Interlocuteur:* Si j'ai droit de passage et qu'un autre yachtman refuse de me le céder, ai-je le droit de foncer sur lui pour l'écarter de ma voie?

*Réponse:* Pourquoi cette question?

*Interlocuteur:* Je l'ai fait à plusieurs reprises l'an dernier et la Cour ne m'a jamais donné raison.

*Interlocuteur:* (s'adressant à l'agent de la Gendarmerie royale): Où est ton cheval? (Question posée, en moyenne, 97 fois par jour.)

*Réponse:* Je lui ai confié la garde de mon navire en mon absence.

*Interlocuteur:* Selon mes calculs, la ville de Montréal devrait être située à un degré, 13 pieds de longitude plus à l'ouest qu'elle ne l'est présentement indiquée sur les cartes. Comment expliquer une telle situation?

*Réponse:* Vous avez sans doute raison, monsieur. La solution serait de déplacer la ville de Montréal vers l'ouest le plus tôt possible afin de se conformer à vos calculs,

même si cela implique la nécessité de repousser en conséquence les frontières de l'Ontario.

*Interlocuteur:* Pourquoi le gouvernement n'intervient-il pas pour faire en sorte que les pôles magnétiques correspondent exactement aux pôles géographiques? On pourrait alors se dispenser d'apprendre le calcul des variations.

*Réponse:* Le pôle magnétique se déplace de lui-même. Si vous êtes patient, d'ici quelques milliers d'années, le problème n'existera plus.

*Interlocuteur:* (un enfant s'adressant à l'agent de la Gendarmerie): Êtes-vous un cowboy?

*Réponse:* Seulement durant mes jours de congé.

*Interlocuteur:* M'est-il permis d'installer des phares d'auto sur mon embarcation pour usage durant la navigation de nuit?

*Réponse:* Seulement si vous vous proposez de naviguer dans les rues après la tombée du jour.

*Interlocuteur:* Devrais-je faire installer des feux aux deux extrémités de mon yacht, étant donné que mon embarcation est construite de manière à ce qu'il est assez difficile de différencier l'arrière du devant?

*Réponse:* La navigation de côté pourrait régler votre problème.

*Interlocuteur:* Le service de la météorologie du ministère peut-il exercer un contrôle sur la température?

*Réponse:* Nos météorologistes seraient peut-être tentés d'y croire, mais ils ont encore sans doute beaucoup de chemin à parcourir avant d'y arriver.

Enfin, deux autres questions peut-être encore plus fréquentes que toutes les autres: «Comment sort-on d'ici?...et où sont les cabinets de toilette?»

Ces questions ne sont en fait que quelques-unes dont je me souviens. Si je les avais toutes notées, j'aurais pu en préparer un recueil de plusieurs pages. Je suggère enfin au lecteur soupçonnant d'être choisi, l'an prochain, pour me succéder à notre kiosque du Salon nautique de commencer dès maintenant à se documenter pour faire face au barrage de questions qu'on lui réserve. Il n'est pas trop tôt.



*Au tout début, les traîneaux à chiens servaient au déplacement des habitants et des explorateurs de l'Arctique. Puis vint l'avion de brousse qui permit l'accès aux richesses du Nord canadien. Et maintenant, on vient de mettre à l'essai un nouveau mode de transport qui pourrait être appelé à ouvrir le Grand Nord à un développement encore inconnu.*

## L'AÉROGLISSEUR: nouvelle étape dans le transport septentrional?



L'inventeur de l'aéroglisser, M. Christopher Cockerell, fait une visite à bord au cours de l'Expo 67 à Montréal. Après la fermeture de l'Expo, l'aéroglisser a été dépêché à Churchill, Manitoba, pour y subir des épreuves dans l'Arctique.

Christopher Cockerell, inventor of the hovercraft, inspects one of the craft at the site of Expo 67 in Montreal. After the exhibition closed, the hovercraft was shipped to Churchill, Man., to undergo Arctic trials.

Adaptation d'un article soumis  
par Bryan R. Goodyer  
Services d'information

Le poète Robert Service, s'interrogeant jadis sur les mystères que renferme le Grand Nord, écrivait que les aurores boréales en avaient vu de toutes les couleurs et avaient été témoins de choses fort étranges dans l'Arctique. Mais pour nos populations du Nord canadien, on leur réservait encore une autre surprise.

Il y a quelques mois, un aéroglisser, mystérieux engin de nos temps modernes, a en effet fait son apparition dans le Nord et il sera sans doute appelé dans un avenir prochain à pénétrer dans des endroits encore à peine explorés par l'Esquimau et ses chiens.

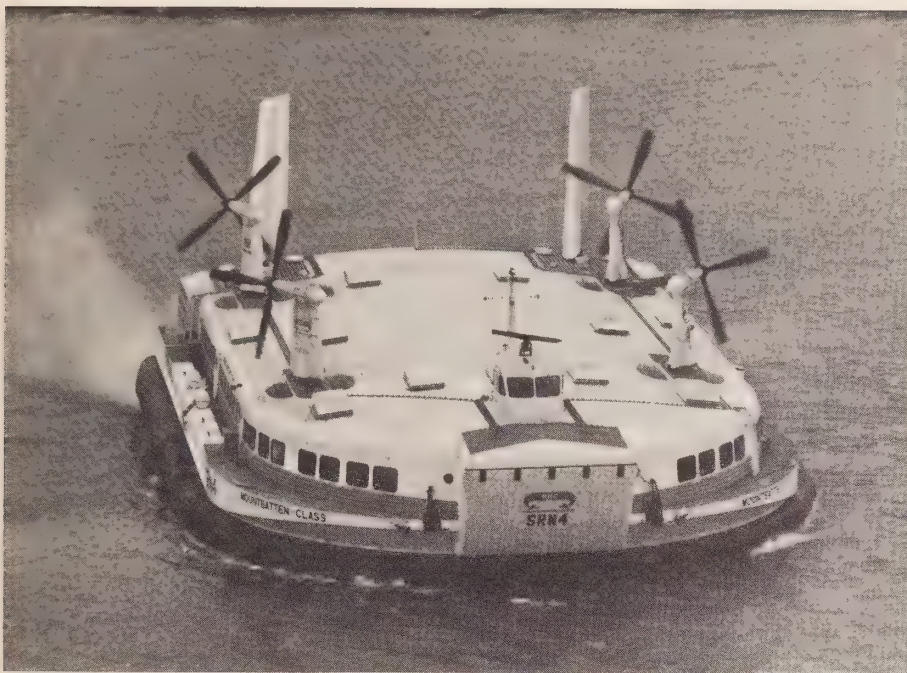
Les essais du SRN-6 ont eu lieu à la base de Fort Churchill, au Manitoba, et le gros appareil, grâce à son comportement dans des conditions difficiles, a émerveillé les Indiens, les Esquimaux et les fonctionnaires affectés à cette base septentrionale.

Le fonctionnaire responsable des essais de l'aéroglisser, le capitaine Bill Jacobs, a déclaré: «Il fonctionne comme une Cadillac dans un défilé de première classe.»

Vingt-huit observateurs, comprenant le haut-commissaire britannique au Canada, sir Henry Lintott, un groupe de journalistes et plusieurs membres du personnel de la Direction des méthodes et des recherches en matière de transport, étaient d'accord.

Tous étaient venus d'Ottawa par avion pour observer à l'œuvre dans les conditions de l'Arctique le SRN-6, un des véhicules à coussin d'air utilisés à l'occasion de l'Expo 67, à Montréal, l'été dernier.

L'endroit où les essais ont eu lieu est une étendue de 10 milles de terrain ressemblant à la région arctique. Elle se



Le SRN-4, plus gros aéroglisseur au monde, est mis à l'eau sur la côte sud de l'Angleterre.

*The largest hovercraft in the world, an SRN-4, now renamed as the first of the Mountbatten class, takes to the water off the southern coast of England.*

situé près du centre d'épreuve de fusées exploité conjointement par le Conseil national de recherches et la *National Aeronautical and Space Administration* des États-Unis.

Le but de ces épreuves était de fournir une évaluation technique et économique de ce genre de transport dans de rigoureuses conditions septentrionales.

De plus, les essais étaient organisés pour étudier l'utilisation de l'aéroglisseur dans les régions du Grand Nord où le transport terrestre au moyen d'autres modes est lent et dangereux, et où le transport aérien est relativement dispendieux.

Les épreuves de Fort Churchill étaient commanditées conjointement par le ministère des Transports, le ministère des Affaires indiennes et du Nord, le Conseil de recherches pour la défense et le Conseil national de recherches.

Le véhicule à l'épreuve fut un SRN-6 de la *British Hovercraft Corporation*, exploité par la société *Hoverwork Canada Limited* d'Ottawa.

Il a une charge payante de 9,000 livres, peut se déplacer à une vitesse maximale de 60 milles à l'heure, et possède un rayon d'action d'environ 150 milles.

L'appareil peut porter jusqu'à 38 passagers et il est propulsé par un seul turbo-propulseur Bristol Siddeley "Marine Gnome".

Les épreuves se sont déroulées sous la surveillance de l'établissement d'essai du génie (terre) du ministère de la Défense nationale.

Une équipe de sept personnes, dirigée par le capitaine Jacobs, était chargée de tous les aspects techniques du programme d'essai.

M. A. G. Kennedy, du bureau régional du ministère des Transports, à Winnipeg, était le représentant administratif du Ministère à l'emplacement d'essai, tandis que M. Herbert Eichner, économiste de la direction des méthodes et recherches en matière de transport, avait été chargé dès le début du programme de coordination.

Soulevé par un coussin d'air qu'il crée lui-même, l'appareil glisse au-dessus d'une surface de terre, d'eau ou de glace, ce qui le rend idéal pour les conditions du Nord, où le terrain inégal et la neige profonde empêchent l'utilisation de véhicules terrestres classiques.

Les passagers ne remarquent le bruit que lorsque l'appareil développe la puissance nécessaire pour gonfler ses «jupes». En croisière, le bruit ne paraît pas plus fort aux passagers que celui des moteurs d'un turbopropulseur moderne.

A Fort Churchill, l'appareil a résisté à une température de 45 degrés sous zéro et a démarré dans l'air froid de l'Arctique bien plus rapidement que certains des aéronefs géants qui sont garés à la même base.

Les épreuves ont-elles été couronnées de succès?

Bien qu'aucun rapport officiel n'ait encore été publié, le capitaine Jacobs et les membres de l'équipage d'essai sont très enthousiastes au sujet des possibilités du SRN-6.

Selon le capitaine Jacobs, le véhicule à coussin d'air est l'un des modes de transport les plus importants qui soient apparus au cours du présent siècle.

A son avis, aucune autre forme de transport dans le Nord ne peut actuellement le déclasser.

Les essais ont aussi impressionné les fonctionnaires du ministère des Transports qui avaient annoncé plus tôt l'achat d'un modèle plus petit, le SRN-5, qui sera utilisé par la Garde côtière canadienne, cet été, sur la côte du Pacifique.

Un agent des projets de la division de génie mécanique au Conseil national de recherches, M. A. S. Jackson, a déclaré: «Nous voulons savoir s'il est économique d'appliquer le concept du véhicule à coussin d'air à certains rôles du Canada, tels le transbordeur à grande vitesse, l'embarcation de plaisance, le camionnage, le bateau-pompe, la lutte contre les incendies des aéronefs accidentés, le relevé, l'agriculture, et d'autres usages possibles.»

«Le véhicule à coussin d'air n'est pas la solution magique aux problèmes de transport de tout le monde, déclare M. A. B. German, président de la société *Hoverwork*, mais il existe certainement des difficultés qui peuvent être réglées beaucoup plus économiquement au moyen des applications du coussin d'air.»

Il reste à voir quel rôle jouera l'aéroglisseur dans le domaine du transport au Canada.

Mais, comme le signale un observateur qui a vu les essais du gros appareil à Fort Churchill: «Tout comme le traîneau à chiens et l'avion de brousse qui l'ont précédé, l'aéroglisseur possède des possibilités importantes en ce qui concerne l'aménagement du Grand Nord canadien.»



*First it was the dog sled, then the bush plane  
that opened up the potential of Canada's  
North. Now they've tested a new method of  
moving people and goods. It's . . .*

## THE HOVERCRAFT: a new era in Arctic transportation?



*"There are strange things done in the mid-  
night sun*

*By the men who moil for gold;*

*The Arctic trails have their secret tales*

*That would make your blood run cold;*

*The Northern Lights have seen queer sights,*

*But the queerest they ever did see..."*

by Bryan R. Goodyer  
Information Services Division

...was a hovercraft you think when you first see the big SRN-6 parked outside the terminal at Fort Churchill, Manitoba.

But after two days of watching the big machine in action you wonder if Robert Service, the poet of the North, would really have thought it all that unusual.

Certainly the Indians, Eskimos and government personnel serving at this northern base don't.

"It rides," said Captain Bill Jacobs, chief test officer in charge of the hovercraft evaluation trials, "like a Cadillac on a parade square."

Twenty-eight observers, including Sir Henry Lintott, British High Commissioner to Canada, a party of newsmen and several members of the D.O.T.'s Transportation Policy and Research Branch, agreed.

All had flown up from Ottawa to get a first hand look at the SRN-6 (one of those used at Expo 67 in Montreal last summer) in action under Arctic conditions.

The "parade square" referred to by Captain Jacobs, 37, of Ottawa, was a 10-mile stretch of sub-Arctic landscape between this northern Manitoba community and the Churchill Research Range, a rocket test centre operated jointly by the National Research Council and the National Aeronautics and Space Administration of the United States.

The aim of the hovercraft tests was to provide engineering, technical and economic evaluation of this type of transport under severe northern conditions.

In addition, the trials were planned to study the hovercraft's suitability for use in areas of the far north where overland transportation by other means is slow and dangerous and air transport is relatively expensive.

The Fort Churchill tests were conducted under the joint sponsorship of the Department of Transport, the Department of Indian Affairs and Northern Development, the Defence Research Board and the NRC.

The test vehicle was a British Hovercraft Corporation SRN-6 operated by Hoverwork Canada Limited of Ottawa.

It has a payload capacity of 9,000 lbs., can travel at speeds up to 60 miles an hour, and has a range of approximately 150 miles.

The craft is capable of carrying up to 38 passengers and is powered by one Bristol Siddeley "Marine Gnome" turbo-jet engine.

The trials were held under the supervision of the Land Engineering Test Establishment of the Department of National Defence.

A seven-man team, headed by Capt. Jacobs, was responsible for all technical aspects of the test program.

A. G. Kennedy, of the D.O.T.'s regional headquarters in Winnipeg, was the department's administrative representative at the test site, while the co-ordinating function from the inception of the program has been the responsibility of Herbert Eichner, an economist with the Transportation Policy and Research Branch.

Supported by a self-generated cushion of air, the craft skims just above a ground, water or ice surface which makes it ideal for northern conditions where rough terrain and deep snow prohibit the use of conventional ground vehicles.

Passengers are aware of noise as such only while the craft is generating the power to inflate its "skirts." Underway, it sounds



*The test crew, in Arctic clothing, put the hovercraft through its evaluation tests.*

no louder to those inside than the engines of a modern turbo-prop airliner.

At Fort Churchill, the craft withstood temperatures as low as 45 degrees below zero and started in the frigid Arctic air long before some of the giant aircraft with which it shares terminal space at the base.

How successful were the tests?

While nothing official has been reported yet, Capt. Jacobs and the test crew are highly enthusiastic about the capabilities of the SRN-6.

Capt. Jacobs says the air cushion vehicle is one of the most significant forms of transportation to appear in this century.

In his opinion there is no other form of transportation in the north today that can beat it.

The tests also impressed Department of Transport officials who had announced earlier the purchase of a smaller SRN-5 model which will go into service with the Canadian Coast Guard on the west coast this summer.

Said A. S. Jackson, project officer with the NRC's mechanical engineering division: "We want to know if it is economically feasible to employ the air cushion vehicle concept for such roles in Canada as the high-speed ferries, pleasure craft, truck transportation, fire boats, airfield crash and rescue, survey work, agricultural use and possible other applications."

"The air cushion vehicle is not the magic answer to everybody's transportation problems," says A. B. German, president of Hoverwork, "but there are undoubtedly certain problems which can be solved far more economically by means of air cushion applications."

Just where the hovercraft will fit into the story of Canadian transportation remains to be seen.

But as one observer who watched the big machine going through its paces at Fort Churchill observed: "Like the dog sled and the bush plane before it, the hovercraft has a tremendous potential in the development of Canada's North."



## **nominations aux services du personnel**

Trois nouveaux hauts fonctionnaires viennent d'assumer des postes supérieurs aux services du personnel du ministère. Il s'agit de M. Robert H. Dowdell, âgé de 38 ans, nommé directeur du personnel aux services de l'Air, M. Louis Lavoie, âgé de 42 ans, directeur du personnel, services de la Marine et M. Michael L. Bolger, âgé de 37 ans, directeur des relations de travail.

M. Dowdell, anciennement du ministère des Forêts et du Développement rural, est diplômé de l'Université Western Ontario, de London, et de l'Université Carleton d'Ottawa.

Né à Windsor (Ont.), M. Dowdell a déjà travaillé à la Commission de la Fonction publique, au ministère de la Défense nationale et à l'Office national du film.

Il est membre de la Public Personnel Association et du Federal Institute of Personnel Management.

M. Lavoie a quitté son poste de directeur des relations avec les employés à Chemcell Ltd (Montréal) en entrant au service du ministère des Transports.

Précédemment, il avait occupé des postes supérieurs au sein des services du personnel de compagnies pétrolières et de compagnies de construction à Montréal, Québec et Toronto.

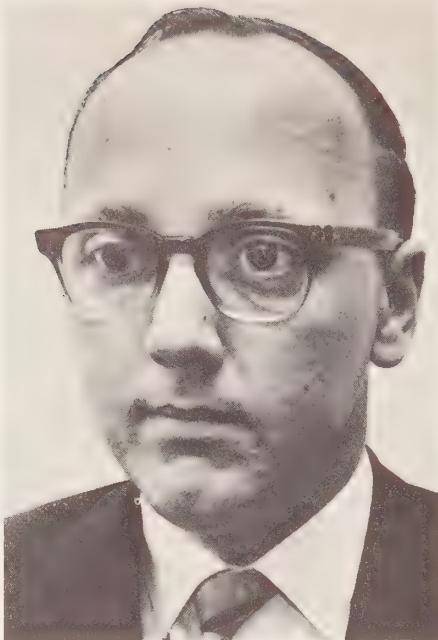
Né à Québec où il fit ses études, il a obtenu un diplôme en commerce de l'Université Laval en 1949.

A Montréal, M. Lavoie était membre de la Chambre de commerce et de la Montreal Personnel Association, directeur de la Canadian Industrial Training Association et directeur de l'Industrial Accident Prevention Association.

M. Bolger a occupé des postes supérieurs aux services du personnel de Massey-Ferguson Industries Ltd, Toronto et de Sperry Gyroscope Company of Canada Ltd, Montréal. Il a aussi à son actif plusieurs années de service dans la Marine royale du Canada en qualité d'officier de pont.

Né à Renfrew (Ont.), M. Bolger est diplômé avec spécialisation en administration d'affaires de l'Université Western Ontario.

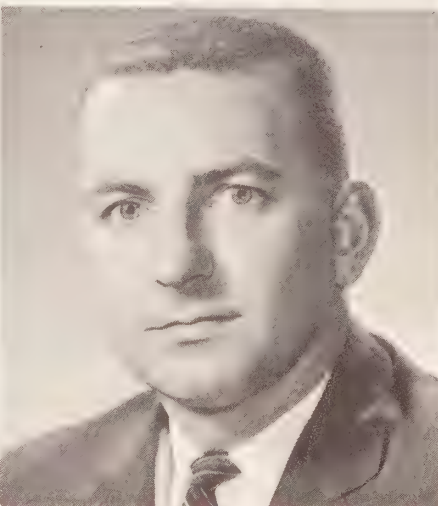
Il est membre de l'American Management Association, de la Personnel Administration Association of Toronto et du Metropolitan Toronto Board of Trade.



*Robert Dowdell*



*Louis Lavoie*



*Michael Bolger*

## **personnel changes**

Three new men appointed to senior personnel posts within the department are now at work. The three are Robert H. Dowdell, 38, Director of Personnel, Air Services; Louis Lavoie, 42, Director of Personnel, Marine Services; and Michael L. Bolger, 37, Director of Staff Relations.

Mr. Dowdell, formerly with the Department of Forestry and Rural Development, is a graduate of the University of Western Ontario at London, and Carleton University, Ottawa.

A native of Windsor, Ont., Mr. Dowdell had previously held positions with the Public Service Commission, the Department of National Defence, and the National Film Board.

He is a member of the Public Personnel Association and the Federal Institute of Personnel Management.

Mr. Lavoie comes to the Department of Transport from Chemcell Ltd., Montreal, where he was director of employee relations.

Prior to that, he held senior posts in personnel work in the oil and construction industries in Montreal, Quebec City and Toronto.

Born and educated in Quebec City, he graduated in Commerce from Laval University in 1949.

In Montreal, Mr. Lavoie was a member of la Chambre de Commerce and the Montreal Personnel Association, a director of the Canadian Industrial Training Association and a director of the Industrial Accident Prevention Association.

Mr. Bolger has held personnel management positions with Massey-Ferguson Industries Ltd., Toronto, and Sperry Gyroscope Company of Canada Ltd., Montreal. He also served in the Royal Navy for several years as an executive officer.

A native of Renfrew, Ont., Mr. Bolger graduated with honours in Business Administration from the University of Western Ontario.

He is a member of the American Management Association, the Personnel Association of Toronto, and the Metropolitan Toronto Board of Trade.

# *“How Do I Get Out of Here?”*

by P. R. M. Toomey

*First Officer*

*CCGS C.D. Howe*

Shortly before the recent opening of the National Boat Show in Montreal, I was selected by a process unknown to me to help man the Department of Transport exhibit.

Never having attended such an affair before, I was not sure just what to expect. I had, however, already guessed that the experience might be unusual to say the least.

My major function was to pass out literature on Water Safety, Rules and Regulations, information on the Canadian Coast Guard and its responsibilities, and answer the questions put to us by the visitors.

Represented at our exhibit were Search and Rescue, Steamship Inspection, the Radio Regulations Branch, the marine division of the Royal Canadian Mounted Police, and the Canadian Coast Guard.

We became a happy little band of warriors holding at bay the onslaughts of the amateur boating enthusiasts who, naturally, knew all about everything and who very often wanted only to show off their knowledge, correct or otherwise.

I should add, though, that there were many serious people who really wanted assistance and guidance. These people we were delighted to see and assist in any way we could.

I don't know how many people attended the show but I would hazard a guess that one in 50 had spent the entire period since the last boat show dreaming up questions with which to floor my colleagues and me.

I give a selection of some of the questions, not always exactly as asked, but generally faithful to the original.

The answers that appear are definitely *not* always those given in actual fact.

I leave to the reader to decide which answers may have actually been made, although I must point out that every question shown was asked of me.

*Questioner:* Why is the Canadian Coast Guard necessary when we can always use the United States Coast Guard if needed?

*Answer:* Impossible to answer in a few words but it would make a good four-hour lecture if you care to come back after the show.

---

*Q:* Is there any law against putting an 88-horsepower motor on a nine-foot wooden dinghy?

*A:* Archimedes Law of Flotation would seem to be against it.

---

*Q:* Where can I purchase a navigational chart of Lake Keegan?

*A:* Where is that located please?

*Q:* In the park at the end of our street.

*A:* I suggest you try the local parks and recreation authority.

---

*Q:* If I have the right-of-way in my boat, am I allowed to run into the “give-way” vessel if he fails to let me pass?

*A:* Why do you ask?

*Q:* I did it several times last year and the court said I was wrong each time.

---

*Q:* (To the RCMP officer) Where is your horse?

*A:* Minding the boat while I'm away. (This question was asked on the average about 97 times daily.)

---

*Q:* According to my detailed calculations, Montreal should be one degree, 13 minutes of longitude west of where it is presently shown on charts. Why is this?

*A:* You may be right, sir, we will move the city of Montreal west as soon as possible to agree with your calculations, although this will mean shoving Ontario over too.

*Q:* Why does the Government not move the Magnetic Pole to the Geographic Pole so we need not bother with learning about variation?

*A:* The Magnetic Pole is moving on its own, so if you wait a few thousand years, your problem will solve itself.

---

*Q:* (Again, to the RCMP officer from a small child) Are you a cowboy?

*A:* Only on my days off.

---

*Q:* Is it all right to fit up a car-lighting set on my boat for use at night?

*A:* Only if you plan to navigate your boat along the highway after dark.

---

*Q:* Should I fit navigation lights to both ends of my houseboat as both ends look exactly the same?

*A:* Try travelling sideways and ignore the problem.

---

*Q:* Is the Meteorological Branch able to control the weather?

*A:* They like to think they can, but still need a lot of practice.

---

*Q:* How do we get out of here? (This question was asked about every five minutes.)

*Q:* Where can I find the washrooms? (This question was asked about every six and a half minutes.)

---

The above questions are just a selection of the ones I remember for one reason or another. A complete anthology would fill a book.

If any reader should be selected next year to attend one of these shows for the first time, let him be prepared.

You have to get up early in the morning to keep ahead of the man-in-the-street these days and even earlier for the children.



# goodbye to old glory

*Old Glory Mountain, B.C.*—A colorful page in the story of the Meteorological Branch ended this winter when the three-man weather observatory atop this 7,700 foot mountain in the West Kootenays was destroyed by fire.

The station will, of course, be replaced by an automatic weather station but, in the eyes of veteran Canadian weathermen, things will never be the same.

The end of one of the country's most unusual stations came with dramatic suddenness:

**"WEATHER STATION OLD GLORY MOUNTAIN BURNED TO GROUND IN EARLY MORNING HOURS OF JANUARY 7,"** read the wire to headquarters. **"BUILDING AND CONTENTS A TOTAL LOSS. INJURY TO ONE PERSON SEVERE FROST BITE AND EXPOSURE."**

It seemed like such an ignominious end for the well-known station at which so many west coast weathermen had served.

It all started 25 years ago when the need for a mountain observatory to provide information for aviation, weather data and icing conditions became obvious.

## A new route

The fledgling Trans-Canada Airlines (now Air Canada) was flying a new route between Vancouver and Lethbridge, Alta., at low altitudes and needed a navigational aid about midway between the two centres.

D. C. Archibald, chief, basic weather, who was then western superintendent of Met., chose Old Glory mountain as a site for the observatory after making two survey trips on foot through the area.

And so one of Met's most unusual stations was established 14 miles by road and trail from Rossland B.C., on a remote mountaintop.

The main building erected there provided office space and living quarters for a staff of three Met. technicians. The building was of frame construction heated by a hot air, coal-burning furnace. A fuel storage shed about 10 to 15 feet to the north contained drums of fuel for the small lighting and power plant.

A forestry lookout, the only other building on the mountain, is located 150 feet from the main building.



*Met. Technician Bill Raithby, survivor of the fire that destroyed the weather station atop Old Glory mountain, surveys interior British Columbia from his post high atop the mountain. These photos were taken less than a year before the fire.*



You get to the site by hiking with pack-horses in summer and on skis in winter, which made it essential that all staff chosen for duty there be experienced skiers.

## Weather reports

Communications consisted of B.C. Telephone Company radiotelephone facilities and separate telecommunications radiotelephone equipment for transmission of weather reports to Castlegar.

Although the weather station was built in 1942-43, Bart Dudley, its first operator who now lives in Rossland, did not actually start work until the fall of 1944. He was joined a few weeks later by Hugh McCaffery from Winnipeg and Ray Skirten from Calgary.

Since then a large group of men have sent out weather observations from atop Old Glory, some of them who remained several years and others who stayed only one summer.

During all this time, the men at the station were kept supplied with food, coal and other essentials by Wilf Gibbard of Rossland, who led his packhorses up and down the steep trails of the mountain in good weather and bad.

At the site, the technicians made hourly reports on the weather to Castlegar and every six hours forwarded a synoptic report to the Vancouver weather office.

On the day of the fire, two of the station's three-man complement, Peter Wright, officer in charge, and Don Todd were in Rossland on a mail and supply trip.

Twenty-four-year-old Bill Raithby was in charge of the station.

## All in order

After filing his last reports to Castlegar and Vancouver, he did some studying, lit the furnace and went to bed.

It was shortly after midnight and everything seemed to be in order.

"I lay in bed for a short time and the next thing I knew I smelled smoke," recalls the young technician, who has since recovered from his ordeal.

"I jumped out of bed and ran downstairs to the furnace room, grabbing a fire extinguisher on the way, but the room was filled with smoke and I had to get out."

Fleeing into the snow dressed only in his underwear and a pair of bedroom slippers, Bill "half-walked, half-crawled" to the forestry cabin where he broke a window and crawled in to find shelter.

When no weather reports were received from the station and Raithby couldn't be reached by radiotelephone, a search party was organized by Peter Wright and Don Todd in co-operation with the Royal Canadian Mounted Police and two Rossland residents.

## Up the mountain

Accompanied by Peter's dog "Cher," a one-year-old Labrador-Shepherd, the group left Rossland and fought their way up the mountain in a blizzard.

At the top seven hours later, they found the station levelled and discovered a near-frozen Bill Raithby huddled in the unheated forestry shelter suffering from frost-bite and shock, more than 25 hours after the fire had broken out.

He was airlifted from the site to hospital in Rossland by a helicopter from Nelson, B.C.

A footnote to the story comes in an item from the Rossland Miner which reports that a mountain rescue team is being formed in the area as a result of the dramatic rescue on Old Glory.

But it is the final line of the wire to Met. headquarters that officially marks the end of what was probably Canada's highest manned weather station: **"WEATHER STATION OLD GLORY PERMANENTLY CLOSED EFFECTIVE JANUARY 7."**

# transport people

## A Lifetime of Service

A man who was born in a lighthouse and spent 35 years in the lighthouse service has died in British Columbia.

Peter Georgeson was one of eight members of the Georgeson family who have served the Department of Transport as lighthouse keepers and assistant keepers.

Born at East Point lighthouse in 1891, Mr. Georgeson was the first white boy born on Saturna Island.

He was appointed keeper at Saturna Island in 1921, as replacement for his father.

In 1939, Mr. Georgeson was transferred to Albert Head lighthouse where he served until his retirement in 1956.

Other members of the family who were in the lighthouse service were his father, an uncle, a brother, his son Kenneth, a nephew and two grandnephews.

Mr. Georgeson is survived by his wife, Nellie, and his two sons, James and Kenneth.

## Another D.O.T. Scholar

The announcement of the 1967 winners of the D.O.T. Bursaries got us wondering how some of our earlier bursary winners had made out.

As time made it impossible to trace all of them, we chose the first three winners and the result—"Where Are They Now"—was published in the January-February issue of *TRANSPORT*.

It prompted Lloyd Mercer, a proud father who works as a D.O.T. electrician

at Gander, Nfld., to write and let us know about his son Harry, who won a \$500 departmental bursary two years ago.

Harry, now 18, is in his second year at Memorial University at St. John's where he's studying to be an electrical engineer.

Born in Gander, Harry attended Gander Academy and Gander Collegiate, graduating in Grade Eleven with an 89 per cent average.

Awarded the D.O.T. bursary, he also received the Herbert Cramm Memorial Shield, the Government Electoral District Scholarship worth \$800 and the Royal Canadian Air Force Ladies' Auxiliary Scholarship of \$25, given to the student with the highest average in the school.

On completion of his first year at Memorial, he was awarded a Centenary scholarship of \$600.

During the summer, Harry was employed by the Federal Department of Public Works in Newfoundland.



Capt. Parker

## Tales of the Sea

Captain John P. Parker, district supervisor of pilots at Sydney, N.S., has published his second book on ships and the sea entitled "*Cape Breton Ships and Men*."

A Cape Breton newspaper calls Capt. Parker's new book "an enthralling aggregation of history, shipyard statistics, biography, ballads and anecdotes."

The review says that everyone with an interest in the sea "will fall under the spell of Capt. Parker's latest book."

The master mariner's first book, "*Sails of the Maritimes*," was published in 1960.

Born in Sydney, Capt. Parker was educated there, at Rothesay Collegiate, Saint John, N.B., and the Royal Military College, Kingston, Ont.

Following a lengthy career as a seaman, Capt. Parker obtained his master's "ticket" foreign-going steam and sail in 1945, one of the last sets of sailing papers issued.

He joined the Department of Transport in 1950.

## A Student First

The son of a D.O.T. electrician at London Airport has become the first full-time paid student president at the University of Western Ontario.

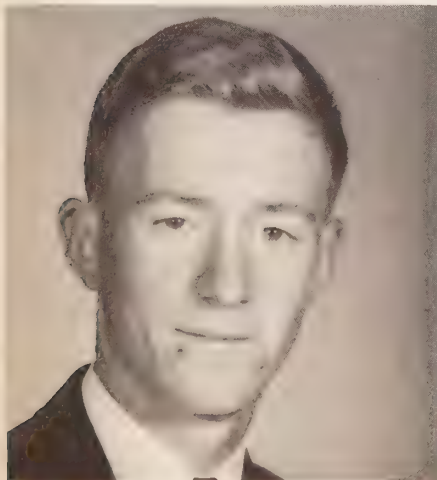
John Yokom, a 23-year-old engineering student who is the son of Mr. and Mrs. Howard Yokom, defeated a second year law student to win the post.

Following his election, John said he would be working for "increased communication and co-operation among students, faculty and administration."

John campaigned for the position on a full-time basis after the university students' council gave the candidates two choices: taking the job full time at a salary of \$3,900 plus tuition for two courses, or hiring an executive assistant.

During his campaign, John stressed the need for more student housing. He also wants the administration to re-open discussions on the possibility of building a student campus centre.

A native of London, John graduated from Sir Adam Beck Secondary School in 1963. He was named the school's citizen of the year the same year.



Harry Mercer



John Yokom



# the search for a new symbol

# concours pour le choix d'un symbole

*In earlier editions of TRANSPORT, the announcement of a competition to find a new symbol for the Department of Transport was made. Below are the details.*

## *The Idea*

The new symbol should illustrate the activity and purpose of the department as a whole. It should be a dynamic expression, reflecting the role of the department as it concerns time, space and motion. It should not be a monogram or contrivance of the letters "DOT". It should not become outdated by new technological or other developments in the field of transportation.

## *The Form*

The symbol should be distinctly unique, easily and speedily recognized as representing the Department of Transport, recognized equally in miniature or enlarged form and capable of reproduction by a variety of methods without loss of form.

## *The Contestants*

The DOT Symbol Contest is open to any Department of Transport employee. A contestant may submit any number of entries.

## *The Format*

Entries may be submitted on plain bond paper, cardboard or illustration board, 8½" by 11" colored white only.

The design may be drawn in pencil or ink, colored black only, or may be a black cut-out of plain black paper, cardboard or illustration board, fixed to the page. There shall be no shading nor stippling of the solid black color.

A second page may accompany the black and white design showing the design to the same scale in color, using pencil, ink, water color or colored cut out.

## *The Submission*

Entries must be submitted not later than Midnight, Oct. 1,

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*Dans des numéros antérieurs de TRANSPORT, nous avons annoncé un concours en vue de trouver un nouveau symbole pour le ministère des Transports. Nous vous en présentons maintenant les détails.*

## *L'idée*

Le nouveau symbole doit illustrer les initiatives et les buts poursuivis par l'ensemble du Ministère. Il doit être une expression dynamique du rôle du Ministère en ce qui concerne le temps, l'espace et le mouvement. Il ne faut pas que ce soit un monogramme ou une disposition des lettres «DOT». Les perfectionnements technologiques ou autres dans le domaine du transport ne doivent pas le rendre suranné.

## *La forme*

Le symbole doit être distinctif, facilement et rapidement reconnaissable comme représentant le ministère des Transports; il doit également être reconnaissable en miniature et dans sa forme agrandie et apte à être reproduit par différentes méthodes sans perdre sa forme.

## *Les concurrents*

Tout employé du Ministère peut participer au concours relatif au symbole du ministère des Transports. Les concurrents peuvent présenter le nombre d'inscriptions qu'ils désirent.

## *Le format*

Les inscriptions peuvent être présentées sur du papier blanc ordinaire, du carton ordinaire ou du carton à dessin, mesurant 8½ pouces sur 11, blanc seulement.

Le modèle peut être dessiné à l'encre ou au crayon, en noir seulement, ou peut être découpé dans une feuille de papier ordinaire, de carton ordinaire ou de carton à dessin noir et fixé sur la page. Le noir ne sera ni ombré ni pointillé.

## *Présentation*

Les délais pour la présentation des inscriptions expirent à

1968, addressed to "Chief, Information Services Division, Department of Transport, Hunter Building, Ottawa, Attention: Symbol Contest Committee."

Each entry shall be accompanied by a plain sealed envelope attached to the back of the entry containing the name, division section, etc., and the home address of the entrant.

There shall be no initials or other mark of identification shown anywhere other than that contained in the sealed envelope. The cover and postal markings will be removed at headquarters before judging.

Contestants may provide one neatly typewritten page on plain white paper with each entry to explain in the fewest possible words the idea of the design.

#### *The Prize*

The originator of the winning design will receive a cash prize of \$150.00 from the department for all rights to the design, which will be officially registered in the name of the Department of Transport with the Registrar of Copyrights.

In the event that identical or nearly identical designs are received, the entry bearing the earliest postmark will take preference.

#### *The Award*

The award will be made with an appropriate ceremony. The donor, time and location of the prize will be decided when the winner has been chosen.

The winning design will be published in the issue of TRANSPORT that follows its selection.

#### *Queries*

Any queries should be sent to the address given for the submission.

minuit le 1<sup>er</sup> octobre 1968; elles doivent être adressées au chef de la Division des Services d'information, ministère des Transports, immeuble Hunter, Ottawa, à l'attention du Comité du symbole.

Chaque inscription doit être accompagnée d'une enveloppe ordinaire cachetée, fixée au verso de l'inscription et contenant le nom, la division, la section, etc., et l'adresse domiciliaire du concurrent, vu que l'enveloppe d'envoi et les marques postales seront enlevées avant que les inscriptions soient présentées au jury.

Les concurrents peuvent fournir une feuille de papier blanc ordinaire, nettement dactylographiée, avec chaque inscription en vue d'expliquer aussi brièvement que possible l'idée du dessin.

#### *Le prix*

L'auteur du dessin gagnant recevra du Ministère un prix en argent de \$150; il renoncera à tout droit au dessin qui sera officiellement enregistré au nom du ministère des Transports auprès du Registraire des droits d'auteur.

Au cas où des dessins identiques ou presque identiques seraient reçus, l'inscription portant l'oblitération postale antérieure aura priorité.

#### *Présentation du prix*

Le prix sera présenté à une cérémonie appropriée. Le choix de la personne chargée de remettre le prix, le moment et le lieu de la cérémonie feront l'objet d'une décision dès que le gagnant aura été choisi.

Le dessin primé sera publié dans le numéro de TRANSPORT qui paraîtra à la suite du choix.

#### *Demandes de renseignements*

Toute demande de renseignements doit être envoyée à l'adresse où les inscriptions doivent être envoyées.





## the rugged individualists who man our inland lights

A Kingston psychiatrist, who studied the men maintaining the lonely lighthouses of Lake Superior, has found that they are unusually stable and well-adjusted people.

Dr. George Laverty, associate professor of psychiatry at Queen's University, Kingston, made his observations during a trip aboard the Canadian Coast Guard Ship *Porte Dauphine*, which was taking the lightkeepers off their stations for the winter late last year.

Dr. Laverty found that, while the lightkeepers are glad to get off their posts at season's end, they are equally as glad to get back each spring.

The job may be considered romantic and there may be some mystery about it, he said, but his study of the men who man the stations showed them to be stable, enjoying a good family life during the summer, able to entertain themselves and able to "think about things without getting bored."

In only one respect did Dr. Laverty find anything that might be considered odd on the mainland: "They seem to have an obsessional interest in keeping their islands tidy and free from debris."

To the lightkeepers, this is not odd at all. Nowhere on the stations will a cigarette package or a piece of waste paper be found strewn about.

Apart from a natural desire for tidiness about their homes, the lighthousemen will tell you that a piece of paper left on a slippery rock may cause a man to slip and fall when he's climbing to his post.

Typical of the lighthousekeepers is Bob Collins, 58, chief keeper on Otter Head Island.

Bob's post is only a mile or so from the mainland but once ashore it's almost trackless bush. Practical travel is by boat to Sault Ste. Marie, 110 miles southeast.

Yet Bob has a simple philosophy about the requirements needed for a good lightkeeper on the lonely Lake Superior stations.

He must be what Bob terms a good sound thinker, have patience, be a jack-of-all trades, like the outdoors, have a hobby.

He must be able to plan tomorrow's work today and, most important, be able to overlook the other chap's shortcomings.

The loneliest station in the east end of the big lake is Caribou Island, 65 miles from the mainland and 75 miles north-

west of Sault Ste. Marie. Yet Keeper Reg Dawson and his wife Jean don't mind it.

For Mr Dawson, 48, there's only one drawback—no public libraries on Caribou. He's trying his hand at writing fiction and the job gives him lots of time to write.

Mel Sherlock, 51, spends his spare time making intricate jewellery from semiprecious agate and amethyst found on his station, East End on Michipicoten Island, about 125 miles northwest of the Sault.

He doesn't see much of his chief, 48-year-old Joe Thibeault, during the nine months they spend together on Michipicoten, but that's by design.

It's an unwritten rule on all the stations not to become too familiar with each other. Nine months is a long time and a windswept stretch of rock and bush that may be as small as a few hundred yards is no place for over-familiarity.

On most stations, one keeper reports to the other on going off shift and there is an occasional social visit between families but that's all.

"That's the best way to get along together," says Mel. Joe Thibeault, a bachelor, agrees.

This last season was Joe's eighth as a lightkeeper.

Like all the others who were taken off their stations, he was glad to leave but he's in a hurry to get back. Eight or 10 days back in civilization are enough, he says.

Like the other keepers too, Joe and Mel and Denny Fogarty, 60, another assistant, are emphatic about not seeing too much of each other during the season.

They see each other three times a day when the shifts change and occasionally they exchange social visits.

"You avoid frictions that way," says Joe.

Joe Thibeault likes the life and wouldn't exchange it for anything else.

"Have you ever heard of a lightkeeper who had to send for a psychiatrist?" he says with a wink.



*It's a good life, the men who man our lighthouses that dot the islands and coastline of rugged Lake Superior will tell you. Above is the main lighthouse at the entrance to the harbour at Port Arthur, Ont.*

## Peterborough engineer wins \$500 merit award

F. W. H. Tuckett, a Department of Transport engineer employed at Trent Canal headquarters in Peterborough, has been presented with a \$500 Merit Award by J. R. Baldwin, Deputy Minister of Transport.

The award, which includes a citation and a cash prize, was presented to Mr. Tuckett in the deputy minister's office.

It is the first Merit Award ever presented to a Department of Transport employee and represents the recognition by management of an outstanding achievement by an employee.

Mr. Tuckett won the award for the invention of a hydraulically operated traffic control gate which will be put into service at the various locks on the Trent Canal.

Mr. Tuckett's invention will save the department a considerable sum of money on the purchase of the gates which are also used on the Rideau Canal and on the St. Lawrence Seaway.

The invention will replace the present gear-driven machine and effect a substantial reduction in total cost because of the simplicity of the hydraulic cylinders as compared to the complicated and heavy design presently required for gears and their necessary bearings, shafts and attachments.

As a canals engineer, Mr. Tuckett is responsible for the electrical and mechanical maintenance of the structures and plant on the Trent Canal system, for the supervision of new electrical installation and the replacement of worn out and obsolete equipment at swing bridges, automatic dams, marine railways and locks.



*J. R. Baldwin, Gordon W. Stead, Assistant Deputy Minister, Marine, and Mr. Tuckett.*

### 15 employees paid \$460 for suggestions

Awards totalling \$460 have been presented to 15 members of the Department of Transport staff in the first two months of the new year, reports E. W. (Ted) Howe, secretary of the Suggestion Award Plan.

The awards ranged from a \$70 presentation to a British Columbia electronics technician to a \$10 award that went to a meteorological technician at Met. headquarters in Toronto.

The winners, their occupations, location and amount of the award are as follows:

NAME	OCCUPATION	LOCATION	AWARD
D. H. Bodkin	Elec/Tech.	Abbotsford, B.C.	\$70
J. Beattie	M/Supervisor	Victoria, B.C.	\$50
Arthur Lockerbie	R/Operator	Sydney, N.S.	\$50
P. Skrepnechuk	R/Operator	Comox, B.C.	\$45
K. W. Statham	R/Operator	Ucluelet, B.C.	\$40
C. A. Somers	Elec/Tech.	Winnipeg, Man.	\$35
J. R. A. Levasseur	R/Inspector	London, Ont.	\$30
J. N. Bell	Met./Tech.	Victoria, B.C.	\$25
M. R. Jensen	Elec/Tech.	Victoria, B.C.	\$25
D. L. Greene	R/Operator	Vancouver, B.C.	\$20
J. C. Ares	Met./Tech.	Roxboro, Que.	\$15
B. W. Barnes	Elec/Tech.	Mont Joli, Que.	\$15
G. E. Chapman	R/Operator	Bull Harbor, B.C.	\$15
Norman Hopper	ATC	Vancouver, B.C.	\$15
A. G. Petrie	Met./Tech.	Toronto, Ont.	\$10



# RETIREMENTS

## Captain Francis Poole

A 71-year-old master mariner, ornithological authority, author and adventurer known as "our man in Goose Bay" has retired from the Department of Transport after 12 years of service.

Captain Francis Poole, marine sub-agent and harbormaster at the Labrador port, was honored recently at a gathering held in his honor in Ottawa.

Capt. Poole began his long career in 1914 when he "signed indentures for four years as an apprentice (cadet) for the princely sum of 40 pounds."

Two years later, Captain Poole joined the Royal Navy and served in two world wars.

He was appointed Commodore of East Coast convoys in the North Sea where he was bombed many times and later sunk by "E" boats.

Sent to Canada, he was in command of H.M.C.S. *Hamilton* training officer candidates and also inaugurated convoys between Halifax and Boston, Mass.

He also served with the British India Line, sailing out of Calcutta as far as Japan.

Emigrating to Canada, he joined the "white empresses" of Canadian Pacific, sailing out of Vancouver to the Orient, and later, finished his career on the North Atlantic, from where he joined the Department of Transport as harbor master at Goose Bay, Labrador.

"It's been grand," said the man who has written three books about his life. "Every one has really been very good all around."

And what does he plan to do now?

"I'm going back to Montreal to work on my writing and do some birdwatching," replied the youthful septuagenarian. "I just wanted to drop by and thank everyone for all they've done."



Gordon W. Stead, assistant deputy minister, marine, and Captain Poole.

## Hans C. Krogen

H. C. (Hans) Krogen has retired as outside plant field supervisor in the Telecommunications and Electronics Branch, Edmonton region, a post he held for the past 20 years.

Mr. Krogen has served the department since 1943 in various duties connected with construction and maintenance and has been involved with the development of the Edmonton region since development began on the Northwest Staging Route.

Mr. Krogen will remain in Edmonton although he plans to return to his native Norway for a visit.

He emigrated from the Scandinavian country as a young man of 23 and has not seen his homeland since that time.

At a dinner held in his honor, Mr. Krogen was presented with a gift from his colleagues by D. J. Dewar, regional controller of telecommunications and electronics.

## Nelson Smith

A veteran of 44 years' service with the Department of Transport, Nelson Smith has retired as chief examiner in the Vancouver radio regulations office.

After some experience in one of the early broadcasting stations in Victoria, Nelson entered government service as a radio operator at Tofino Lifeboat Station on Nov. 12, 1923, and served at Bamfield Lifeboat Station, Estevan Point and Pachena Point.

He later moved to Gonzales Hill and for the next 10 years worked at most of the west coast marine radio stations.

Ultimately, after temporary duty as a radio inspector, Nelson joined the regional office where he became the chief examiner and dispenser of amateur call signs and extracts from the regulations.

Nelson now intends to do a little more fishing and maybe take a part time job if it doesn't interfere with his hobbies. He says he plans to live in "D.O.T. Pensioners' Heaven—Victoria."

## Dorothy Moffat

A long and faithful career in the government service has come to an end with the retirement of Miss D. R. Moffat.

Miss Moffat had been secretary to the chief of forecast division at Met. headquarters for the entire period of her service, a total of 22 years.

Her first boss was Mr. (now Dr.) McTaggart-Cowan, who later became director of the Met. Branch, and is currently president of Simon Fraser University in Vancouver.

Her only other boss was the present incumbent Frank W. Benum who, together with Miss Margaret Sanders, presented Miss Moffat with a going-away gift on behalf of her fellow employees at a testimonial dinner.



Miss Moffat, Mr. Benum and Miss Sanders

## 105 Years of Service

When M. E. (Ed) Leslie, C. R. (Cam) Spence, and R. G. (Roy) Gooding retired recently, they had accumulated between them a total of 105 years of service with the radio regulations division of Toronto region.

Mr. Leslie (30 years) and Mr. Spence (35 years) had been assigned to the Toronto office throughout their careers latterly in charge of the licensing and interference sections respectively.

Mr. Gooding (40 years) had served in Toronto, Windsor, Sault Ste. Marie. When he retired, he was inspector in charge at the North Bay office.

## G. N. McTavish

G. N. (Neill) McTavish, inspector in charge of the Kelowna radio regulations field office since 1955, has retired from the Department of Transport after 31 years of service.

Born in Johannesburg, South Africa, Mr. McTavish came to Victoria when he was 12. He first joined the D.O.T. in 1920 and, during the next four years, served at Estevan Point, Triangle Island, Alert Bay, Bull Harbour and Point Grey.

Then, after a 15-year period during which he worked as a ship's radio operator and for a British Columbia logging company, Mr. McTavish rejoined D.O.T. in Victoria in 1941.

At a retirement party in his honor, attended by fellow workers, representatives of aviation, broadcasting and communication companies, Mr. McTavish was presented with a portable typewriter.



G. N. McTavish

## L. J. Debenham

L. J. (Lou) Debenham, the first officer-in-charge and subsequently telecommunications area manager at Winnipeg International Airport, has retired, ending 36 years of government service.

A native of Sintaluta, Sask., Lou started his career in 1931 as a radio operator with the old Department of Railways and Canals. He was first assigned to Churchill VAP, a marine coast station.

On completion of his Churchill assignment in 1937, Lou was assigned to Winnipeg range as OIC when the station was first established. He held this position until his retirement and saw it grow from a three-man station to a complex of more than 70 employees.

In the early days of the 30's, Lou recalls, "one would leave Halifax by boat convoy and after several months reach Churchill for a tour of duty."

The old VAP marine building was in those days a simple structure having a small transmitter and receiver, bunk beds and eating area, all housed in one room. This luxurious life didn't seem to hamper Lou's health or have any after effects as he retired from D.O.T. without using a single day of his sick leave.

Last December, more than 100 friends and colleagues, including W. E. Fenn, regional director of air services at Winnipeg, gathered to honor Mr. and Mrs. Debenham.

The guest of honor was presented with a painting portraying his first assignment at Churchill where, at the time, he inscribed his name, the date and the call sign of the station on a prominent rock.

After the presentation, Lou presented Mr. Fenn with an electrolytic detector, a device used to detect signals prior to the invention and development of the vacuum tube, and a power meter that was used extensively during the spark transmitter era.

The items were taken from the S.S. *Alette* believed to be a French vessel that ran aground off the west coast of Hudson Bay in the early part of the century.

Mr. Debenham asked that the items be donated to the Ottawa museum where they might possibly contribute to the interest in marine telecommunications in Western Canada.

## Alex Gillespie

An Air Services mechanic who was involved in the early construction of many of the original fields throughout Northern Ontario has retired.

Alex Gillespie, a first class mechanic with the department, had completed 32 years of service.

During the past 20 years, Mr. Gillespie has been responsible for the maintenance and overhaul of mechanical equipment throughout the Toronto region from his base at North Bay.

At a gathering to mark the occasion of his retirement, he was presented with a plaque containing 32 silver dollars (see photo) by Lorne Hicks, airport manager at North Bay, left, and J. R. Belisle, right, regional manager of airports.



Alex Gillespie



# TRANS CANADA

## Reine des Transports

Ottawa—Une jeune sténographe attachée au bureau principal du ministère, M<sup>lle</sup> Wendy Morgan, âgée de 19 ans, est notre candidate au concours au cours duquel on choisira la «reine de la fonction publique».

Wendy, à l'emploi du ministère depuis six mois, a été couronnée «reine des Transports» au cours d'une soirée dansante organisée par l'Association récréative du ministère en avril.

Ses deux princesses sont M<sup>lle</sup> Mary Ann Laird, 20 ans, de la Division des règlements sur la radio, et M<sup>lle</sup> Judy Brunton, 18 ans, secrétaire à la Direction de l'exploitation des aéroports.

## Queen of D.O.T.

Ottawa—Wendy Morgan, a 19-year-old stenographer at headquarters, has been chosen Miss Department of Transport for 1968.

Wendy, who has been a D.O.T. employee for the past six months, won the honor at an April dance sponsored by the Department of Transport Recreation Association.

Chosen princesses in the annual contest were Mary Ann Laird, 20, a typist in the radio regulations division, and Judy Brunton, 18, a secretary in the Emergency Services and Requirements section of Air Services.



*La reine des Transports*

*Miss Department of Transport*

## Two Marine Officers get new assignments

Two Marine Services officers have taken up new posts within the department.

Glendon R. Stewart, district marine agent at Prince Rupert, B.C., is now executive assistant to Gordon W. Stead, assistant deputy minister, marine.

Captain John A. G. Lewis, who has been Canadian Coast Guard operations officer at Ottawa headquarters since last June, is now district marine agent at Prince Rupert, succeeding Mr. Stewart.

Mr. Stead's new executive assistant was born in Victoria, B.C., on Sept. 20, 1936. A graduate of Victoria College, Victoria, and the University of British Columbia, he holds a B.A. Sc. (Civil Engineering).

Mr. Stewart joined the Department of Transport as an engineer with the staff of the Victoria District Marine Agency in 1960 and subsequently served as superintendent of lights at that agency until he was appointed district marine agent at Prince Rupert in May, 1965.

Capt. Lewis was born in Cardiff, South Wales, in 1932. He was educated at Howard Gardens High School and later completed three years of study at Smith Nautical College, graduating as a cadet captain in July, 1948.

Having acquired three years of sea service as a cadet aboard cargo liners in the Europe-Africa-Far East trade, he returned for periodic studies at the Welsh Advanced College of Technology and Commerce, where he obtained his certificate as Master, Foreign Going, in 1958.

After a further four years at sea in the senior ranks, he was appointed as pilot for the Iraq Petroleum Company in the Middle East. He later proceeded to Trinidad as expeditor-marine superintendent within the Texaco organization.

He entered the service of the Canadian Coast Guard in 1965 and served in various units of the East Coast fleet until April, 1967, when he came to Ottawa to serve on the staff of the director, Marine Operations.

## **Vous dites? . . .**

**Montréal**—On a vu des oiseaux embêter les pilotes au moment de l'atterrissage à Dorval, et l'on a sans doute souvent eu l'occasion de chasser des chiens et chats rôdant sur les pistes, mais la présence d'un loup se baladant sur les terrains de l'aéroport est tout de même assez inusitée.

Pourtant, il y a quelques mois, alors qu'une tempête s'abattait sur l'aéroport de Montréal, Bob Arbique, attaché à l'administration de l'aéroport, recevait de la tour de contrôle un message l'avisant qu'une bête ressemblant étrangement à un loup se promenait sur les pistes d'atterrissage.

Moins d'une demi-heure plus tard, M. Arbique, qui s'était armé d'une carabine dont on se sert pour chasser les oiseaux, revenait à l'aérogare avec son gibier, un loup pesant 55 livres.

La partie de chasse n'a pas duré longtemps, mais elle a quand même été plutôt périlleuse, car, comme l'explique M. Arbique, c'était l'heure d'arrivée de plusieurs envolées à Montréal.

«Alors que je pourchassais la bête, rappelle M. Arbique, un immense DC-8, entre autres, s'est posé sur la piste. Le pilote, témoin de la chasse au loup qui se déroulait plus bas a connu un moment d'émoi, il va sans dire, et ne savait trop comment les gens à la tour de contrôle allaient accueillir sa version de l'incident.»

Le loup n'est plus, mais le mystère demeure. D'où venait la bête et comment a-t-elle réussi à s'introduire sur l'île de Montréal et atteindre un secteur aussi peuplé que celui qui entoure l'aérogare?

## **How's That Again?**

**Montreal**—Life has its surprises for all of us but it is safe to say that no one was more surprised by the turn of events lately than Bob Arbique, an airport operations officer at Montreal International Airport.

It happened one snowy day when Bob was advised by the control tower that what looked suspiciously like a wolfe was prowling the runway area.

Thirty minutes later, armed with a shotgun he uses to keep birds away from the airport, Bob had brought down a 55 lb. grey timber wolf and was wondering if anyone would believe him.

"I had to keep running off the runways from time to time while I was tracking it," said Bob, "as we had a steady stream of incoming flights at the time."

"While I was chasing my four-legged friend, one of those stretched DC-8's landed and the pilot wasn't sure how to advise the tower that he had just missed a wolf."

Why the wolf headed for the airport, which is located in a heavily built-up area of Montreal Island and how he got onto the island in the first place, says Bob, will likely remain a mystery.

## **Lighthouse Model Presented to Captain G. J. M. Williams**

**Saint John, N.B.**—A model of Gannet Rock Light and Alarm station, once one of the most powerful lightstations in the world, has been presented to Captain G. J. M. Williams, district manager of the Marine Services base here.

The model, made of copper by D.O.T. tinsmith Carman McArthur in his spare time, was presented to Capt. Williams by Ted J. Stephen, district engineer.

Equipped with a flasher which causes the light to flash on and off, the model is an exact replica of the Gannet Rock station, located at the mouth of the Bay of Fundy, approximately nine miles south of the village of Seal Cove, Grand Manan Island.

The station was established in 1832 and its services are used by all ocean-going shipping entering the Bay of Fundy bound for Saint John harbor and other ports in the upper reaches of the Bay.

Fitted with unusually large magnifying prisms and a fog alarm known as a diaphone "G" type which is believed to be the only one of its type in operation in Canada today, Gannet Rock was considered to be one of the most powerful lights in the world.

Its original light equipment was removed from the wooden tower in 1967 and presented to the Historical Society of Grand Manan which plans to put it on permanent display.

A small temporary beacon took its place at Gannet Rock and will remain there until the wooden tower is replaced by a concrete structure.

**CENTENNIAL PROJECT COMPLETE**—The completion of one of the Department of Transport's Centennial projects was marked in Ottawa recently when J. R. K. Main, a former director of civil aviation who is now retired, presented French and English copies of his book "Voyageurs of the Air" to Transport Minister Hellyer.

**PROJET DU CENTENAIRE**—Le ministre Paul Hellyer s'entretient avec M. J. R. K. Main, auteur d'un volume portant sur l'histoire de l'aviation civile au Canada. Un exemplaire de l'ouvrage s'intitulant «Les voyageurs de l'Air» a été présenté au ministre il y a quelques semaines. Le volume a été publié comme projet du Centenaire de la Confédération.

## **New Firefighter**

**Ottawa**—Latest addition to the Department's Airport Emergency Services fleet is the Mark II Small Foam Truck.

Seventeen of the trucks have been ordered from the manufacturer, Pyrene Manufacturing Company of Canada, for use at smaller airports across the country.

Built to D.O.T. specifications, the new vehicle's equipment can be fully controlled by one man seated in the driver's seat.

A cab-mounted turret is capable of producing 2,560 Imperial gallons of foam per minute.

## **Mutations**

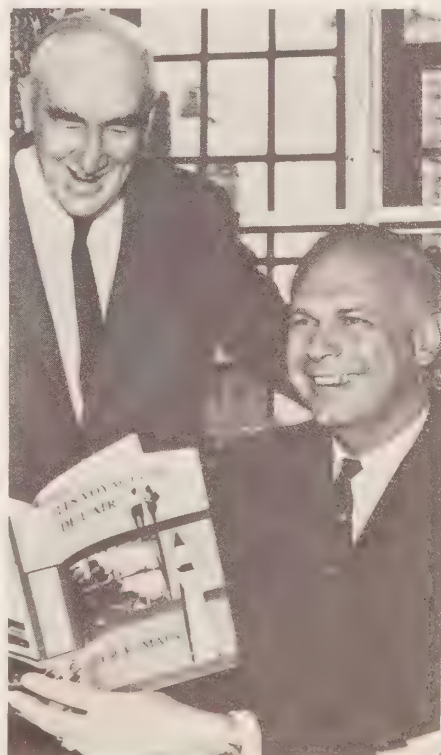
Deux employés des Services de la marine viennent d'être affectés à de nouveaux postes au ministère.

M. Glendon R. Stewart, agent régional de la marine à Prince Rupert (C.-B.), devient adjoint exécutif de M. Gordon W. Stead, sous-ministre adjoint pour la marine.

Le capitaine John A. G. Lewis, qui était officier des opérations de la Garde côtière canadienne à Ottawa depuis juin dernier, succède à M. Stewart à l'Agence de la marine de Prince Rupert.

Le nouvel adjoint de M. Stead est un diplômé de l'Université de la Colombie-Britannique en génie civil. Il est à l'emploi du ministère depuis 1960.

Le capitaine Lewis, natif de South Wales, a commencé sa carrière en mer à l'âge de 16 ans. Il a joint les rangs de la Garde côtière canadienne en 1965.





# Transport

## ALBUM

### des Transports



**WHOOOPS!!!**

What looks like an optical illusion isn't, explain engineers building the Great Slave Railway, a 438-mile line that runs from Peace River, Alberta, to Hay River in the Northwest Territories. It's a "sun-kink" that occurs when the sun heats up rail and ties laid on the railway grade before ballast has been put down and is easily repaired. The two men surveying the sun's damage are Canadian National Railways' officials. The railway is being built and operated by Canadian National with the financial backing of the Department of Transport.

**AIE!...QUE SE PASSE-T-IL?**

Ce n'est pas une illusion d'optique. La courbe qu'on aperçoit au loin dans la voie ferrée est bien là, et elle a été causée par l'effet de la chaleur du soleil sur les rails et traverses non encore ballastés. Le ballast, mélange de cailloux et de gravier, sert à maintenir la voie ferrée bien en place. La courbe a été découverte dans le tronçon de chemin de fer s'étendant sur une distance de 438 milles entre Peace River, Alberta, et Hay River, dans les Territoires du Nord-Ouest. Le chemin de fer est en voie de construction avec l'aide financière du ministère des Transports. Il sera exploité par le Canadien-National.

# TRANSPORT

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# CANADA





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**Editor Bryan R. Goodyer**

**Rédacteur français Edouard Deslauriers**

ROGER DUHAMEL, F.R.S.C., QUEEN'S PRINTER AND  
CONTROLLER OF STATIONERY, OTTAWA, 1968

ROGER DUHAMEL, M.S.R.C., IMPRIMEUR DE LA REINE ET  
CONTRÔLEUR DE LA PAPETERIE, OTTAWA, 1968



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A Canadian Coast Guard S-61 helicopter carrying supplies comes in for a pinpoint landing at Triple Island Lighthouse near Prince Rupert, B.C.

(D.O.T. photo)

Un hélicoptère de la Garde côtière canadienne s'apprête à livrer des approvisionnements au phare de Triple Island près de Prince Rupert (C.-B.).

(Photo du ministère des Transports)



## on jargon

In the last issue I referred to the use of simple language and my dislike of the adage "Never use ten words where one hundred will do". There is another aspect of communication equally applicable to writing and to conversation, on which I comment now.

Any person operating in a single field tends to use specialized words and phrases which have a limited and unique meaning within his area of operation. In large and complex organizations, whether private business or government departments, full and necessary communication between individuals and between units becomes more difficult when a specialist uses the jargon of his trade in dealing with individuals in another field.

A recent telecommunications report from a source outside the Department informed me in reply to a question about use of radio channels and possible interference that "The ac-

tual discrimination that can be obtained is less than the minimum theoretical polarization discrimination". For a lay manager dealing with an administrative problem, this requires either a couple of additional phone calls or conversations and then a rewriting in simple English.

Equally, when economists talk about "Discounted benefits excluding considerations regarding accident-cost savings and unquantifiable social impacts", time is wasted because further explanations may be requested as a means of changing this into language that can be understood by non-economists.

Those who unwittingly slip into the habit of using words and phrases having a specialized meaning within a limited area should use simple commonly-known words and phrases when engaged in communications with other trades and disciplines, as a basic principle of good management.

## du jargon

Dans le dernier numéro je faisais allusion à l'emploi d'un langage simple et je faisais part de mon aversion pour l'adage «Ne jamais employer dix mots quand cent feront l'affaire». Il est un autre aspect de la manière de s'exprimer dont je veux vous entretenir, et qui s'applique aussi bien aux écrits qu'à la conversation.

Tout individu qui travaille dans un domaine particulier a tendance à utiliser un vocabulaire et des expressions spécialisées qui ont une certaine signification dans son champ d'activité et uniquement dans ce domaine. A l'intérieur de grandes organisations complexes, qu'il s'agisse de l'industrie ou de l'administration, la parfaite communication indispensable entre les individus et entre les groupes devient plus difficile lorsqu'un spécialiste utilise, dans ses rapports avec des personnes travaillant dans un autre domaine, le jargon de sa spécialité.

Un récent rapport sur les télécommunications, de source extérieure au Ministère m'avisa, en réponse à une question sur l'emploi des voies radioélectriques et sur le brouillage pos-

sible que «La discrimination réelle qui peut être obtenue est inférieure au minimum théorique de discrimination de polarisation». Pour un directeur profane habitué aux problèmes administratifs, cette phrase nécessite soit plusieurs conversations téléphoniques soit des entretiens, puis une nouvelle rédaction en français clair.

Par ailleurs, lorsqu'un économiste parle d'avantages escomptés excluant toute considération relative aux économies sur le coût des accidents et aux impacts sociaux impossibles à chiffrer, il le fait en pure perte parce qu'il faudra demander des explications pour le traduire dans une langue accessible aux non-économistes.

Ceux qui inconsciemment prennent l'habitude d'employer un vocabulaire et des expressions qui ont un sens particulier dans un domaine restreint doivent prendre pour règle de bonne organisation d'employer un vocabulaire et des phrases simples du langage courant lorsqu'ils communiquent avec des personnes d'autres professions et disciplines.

*J. R. Baldwin*

Deputy Minister

Sous-ministre



Mme Bullock et sa sœur s'arrêtent à l'entrée du «souk», place du marché qui s'étend sur des milles à l'intérieur de la ville de Tunis.

Mrs. Bullock and her sister pose for the photographer at the entrance to the Soukhs (bazaars) which meander for miles and miles through Tunis.



## affectation: TUNISIE

Adaptation d'un article préparé  
par Bryan Goodyer  
des Services d'information

Le capitaine Fred Bullock, en acceptant une mission spéciale d'un an en Tunisie pour le compte de l'ONU, s'est engagé dans une aventure enrichissante qui allait le conduire d'un bout à l'autre d'un pays dont l'histoire captivante remonte au IX<sup>e</sup> siècle avant Jésus-Christ. Le capitaine nous livre ici quelques-unes des impressions recueillies au cours de son séjour dans ce pays où partout l'on retrouve des vestiges des diverses civilisations qui s'y sont succédé.

Durant son séjour en Tunisie, le capitaine Bullock a aidé le pays nord-africain à amener ses services maritimes aux normes préconisées par la Conférence pour la sauvegarde de la vie humaine en mer, de 1960. Le Canada avait été invité à y déléguer un de ses spécialistes en questions maritimes. Le capitaine Bullock, qui est bilingue et qui a passé 24 ans en mer et 15 ans au service du ministère fédéral des Transports, s'était offert pour le poste et il a été accepté.

La Tunisie, ancien protectorat français, est indépendante depuis 1955. Pendant au moins 300 ans, elle a fait partie de l'Empire Ottoman. C'est un pays arabe de 3,375,000 habitants d'expression arabe et française. Les affaires gouvernementales sont cependant traitées en français.

M. et Mme Bullock sont arrivés à Tunis peu avant Noël, mais, comme la Tunisie est un pays mahométan, c'était comme si Noël n'avait jamais existé, affirme le capitaine. «On se serait cru dans un autre monde», dit-il.

Tunis, connue sous le nom de la Médina, cité médiévale antérieure à la chrétienté, possède encore certains bâtiments qui existaient à l'époque des croisades.

Les «souks» (marchés) sont vieux de plusieurs centaines d'années, et les endroits qu'on leur réserve s'étendent sur plusieurs milles à l'intérieur des villes.

Intrigués par les paroles célèbres pro-

noncées jadis par la vedette de cinéma Charles Boyer: «Come with me to the Casbah...», M. et Mme Bullock ont tenu à visiter la casbah de Tunis. Ils ont été étonnés de se trouver au cœur du quartier des édifices du gouvernement. La casbah des temps modernes ne ressemble certes plus en rien à celle de l'époque où le souverain y aménageait sa citadelle.

Durant les trois premiers mois de leur séjour en Tunisie, M. et Mme Bullock ont demeuré dans une agréable villa, au pied du cap de Carthage. Les eaux de la Méditerranée baignaient les murs de leur jardin.

Carthage est l'ancienne cité des Phéniciens qui fut détruite par les Romains en l'an 135 avant J.-C., à la fin de la troisième guerre punique. «Carthage, rappelle le capitaine, fut en effet détruite et tous ses habitants furent passés au fil de l'épée, à l'exception de ceux qui étaient destinés à l'esclavage.»

«Nous vivions sur les pentes de la

colline Dido (également appelée Didon) qui fut témoin des dernières velléités de résistance des Carthaginois. On y voit encore les grosses pierres de 100 à 150 livres que les Romains lançaient par catapulte contre la ville assiégée. J'avais peine à croire que les Romains pouvaient les lancer à plus de 700 verges.»

«Lorsque la ville fut prise d'assaut, continue le capitaine Bullock, les habitants ont enfoui leur argent dans des jardins. C'est ce qui explique que les Tunisiens mettent continuellement à jour de vieilles pièces et de vieux morceaux de métal ainsi que des lampes et des figurines en terre que l'on offre aux visiteurs et aux touristes.»

En dépit de ses longues heures de travail, six jours par semaine, le capitaine Bullock a trouvé le moyen de voir la plus grande partie du pays, et, avec une Volkswagen achetée au début de leur séjour, lui et son épouse ont poussé vers le sud jusqu'à l'oasis de Nefta, en bordure du Sahara.

Entre autres, ils ont pu contempler le fameux colisée romain d'El Djem. Presque aussi grand que celui de Rome, il

est encore dans un état remarquable de conservation.

Ils ont visité également le palais du Bardo, résidence des beys ou des dirigeants de Tunis. C'est un édifice fascinant, aujourd'hui transformé en musée, et qui regorge de témoignages des civilisations qui se sont succédé en Tunisie.

Selon le capitaine Bullock, le gouvernement tunisien encourage par tous les moyens possibles l'industrie touristique. Sur la côte, on trouve de luxueux hôtels et, dans les régions désertiques du sud, des auberges modernes dotées d'un excellent service.

Un des traits caractéristiques des Tunisiens est leur courtoisie, souligne le capitaine. «C'est extraordinaire. Tout le monde vous serre la main, tous les jours, depuis le portier jusqu'au directeur général.»

Le capitaine Bullock a aussi été fortement impressionné par l'intégrité, l'honnêteté des Tunisiens. Les délits courants, comme le vol à la tire, y sont inconnus. «Une femme se promenant seule dans les souks, dit-il, serait plus en sécurité que dans les rues d'Ottawa.»

Les Tunisiens sont vêtus de Djebbas blanches (appelées jellabas en Egypte) et portent comme couvre-chef la chéchia, sorte de fez turc souple. «Ils adorent les fleurs, dit le capitaine Bullock. Il n'est pas rare de voir un costaud, travaillant dans la rue, une fleur derrière l'oreille. De temps à autre, il s'arrête pour en respirer le parfum avant de se remettre au travail.»

«A part les températures élevées, le ciel tunisien est d'une clarté magnifique. Cependant, lorsqu'il pleut, continue le capitaine, ce sont réellement des averse. Une fois, au cours d'un orage, j'ai vu l'eau atteindre les moyeux de ma voiture en moins d'une heure.»

«Mais c'est surtout la courtoisie des Tunisiens que je n'oublierai jamais, conclue le capitaine Bullock. J'ai eu l'impression que les Tunisiens fondent de grands espoirs sur l'avenir. Bien qu'ils viennent d'accéder à l'indépendance, après des siècles de conquêtes et de colonialisme, ils n'en restent pas moins très cosmopolites dans leurs conceptions et amicaux et hospitaliers envers les autres peuples.»



Cette photo prise dans le désert fait voir un arc romain, vaste portique monumental fort bien conservé rappelant une autre époque dans l'histoire de la Tunisie.

On the desert, a camel driver stopped for the photographer in front of the remains of a well-preserved Roman arch that stands as a reminder of the country's history.



# assignment: TUNISIA

by Bryan R. Goodyer  
Information Services Division



Captain and Mrs. Bullock relax at their home just outside Tunis.

*Le capitaine et Mme Bullock se reposent à leur résidence en banlieue de Tunis.*

When Captain Fred Bullock arrived in Tunisia after accepting a one-year United Nations assignment, it was as he recalls, "like going to another world".

It all started when Canada was asked to supply a marine authority capable of assisting the North African country of Tunisia to bring its marine services up to the level of the Safety of Life at Sea Convention of 1960.

A developing nation independent since 1955, Tunisia had been a colony of France for 70 years and a part of the Ottoman Empire for 300 years prior to that.

It is an Arab country of 3,375,000 in which Arabic and French are spoken and its government business is conducted in French.

"I volunteered for the job and was found acceptable," said the bilingual Capt. Bullock, a veteran of 24 years at sea and 15 years of Canadian government service with the Department of Transport.

After departing from Canada, Capt. Bullock and his wife, Marjorie, flew to London, Geneva and Paris for briefings on Capt. Bullock's assignment before arriving in Tunis, capital of Tunisia.

The Bullocks arrived in Tunis shortly before Christmas but, since Tunisia is a Mohammedan country, "it was just as if Christmas never was," recalls Capt. Bullock.

The ancient city of Tunis, he said, is known as the Medina, and is a medieval city dating to pre-Christian times that still contains some buildings which stood there when the Crusaders visited the area.

"The Soukhs (bazaars) are many hundreds of years old and meander literally for miles and miles," said Capt. Bullock.

Recalling an old Charles Boyer movie in which the well-known line "Come

with me to the Casbah" was uttered with a sense of mysterious excitement, Capt. Bullock and his wife were surprised to discover that the Casbah of Tunis was the area where the government buildings were located.

Home for the Bullocks for the first three months of their stay was an attractive villa at the foot of Cape Carthage with the Mediterranean lapping at the garden wall," said Capt. Bullock.

Carthage, as many people know, was the ancient city of the Phoenicians which was destroyed by the Romans in 135 B.C. at the end of the Third Punic War, so it didn't take Capt. Bullock long to kindle his abiding interest in things historical.

"Carthage, a city of 750,000, was destroyed and all its people were put to the sword with the exception of those sent into slavery," said Capt. Bullock.

"We lived on the slope of Dido's (also called Didon) hill where the last great stand of the Carthaginians was made," he said.

"All around the area could be found the ballista (catapult) balls, rough stones weighing 100 to 150 lbs. which were used as siege weapons by the Romans," he said. "I found it hard to believe that the Romans were capable of hurling them more than 700 yards."

"When Carthage was besieged," continued Capt. Bullock, "the people had the habit of burying their money in the garden with the result that Tunisians are forever turning up old coins and old bits of metal in addition to clay lamps and figurines which are offered to visitors and tourists."

During their year-long stay in Tunisia, the Bullocks managed to see most of the country as far south as the Oasis of Nefta on the edge of the Sahara Desert with the aid of a Volkswagen they purchased at the beginning of their assignment.

Their sightseeing, however, was confined to holidays as the hours of work were based on a six-day week. During the summer season, Capt. Bullock worked from 7 a.m. to 1 p.m., the Tunisian version of summer hours, while winter hours were 8.30 a.m. to 12.30 p.m. and 2.30 to 5.30 p.m.

Among some of the attractions they saw was a Roman coliseum at El Djem, almost as big as the one in Rome that stood in near perfect condition on a flat sandy plain.

They also saw the Palace of Bardo, the residence of the Beys or rulers of Tunis, a fascinating building which is now a museum filled with the evidence of civilizations that have passed through Tunisia.

"Tunisia is an absolutely fascinating

place and I'd recommend it highly as a place to visit," said Capt. Bullock who pointed out that the Tunisian government provides excellent facilities for tourists, from luxury hotels on the coast to modern but extremely well-serviced hostels for travellers to the desert regions of the south.

Among the most impressive characteristics of the country the Bullocks discovered was the courtesy of the people.

"It was extraordinary," recalls Capt. Bullock. "Everyone shakes hands, from the janitor to the executive and they do it every day."

Among other things that impressed him, said Capt. Bullock, was that honesty in Tunisia is remarkable and such common place crimes as pocket-picking and purse-snatching are unknown.

"A woman walking alone through the Soukhs would be safer than walking the streets of Ottawa," he said.

Tunisian men, who dress in white Djebbas known in Egypt as Jellababs and wear the Sheshiya, a soft Turkish fez, as headgear, are crazy about flowers, said Capt. Bullock. "It wasn't unusual to see a husky man working in the streets with a flower stuck behind

his ear. Every once in a while you'd see him stop and sniff the flower before resuming his work."

Said Capt. Bullock with a smile: "They are much different from our 'flower people' though."

Apart from warm temperatures encountered there, Capt. Bullock described Tunisia's atmosphere as "beautifully, magnificently clear".

"When it rains, though, it really rains," he said. "on one occasion while we were there, it rained and after about an hour the water was up to my car's hubcaps."

Capt. Bullock said some frost is encountered in the mountains and the weather can be "a little raw" in January, but other than that, it was very pleasant during his stay.

"But it is the courtesy of the people that I shall always remember," said Capt. Bullock.

"I had the impression that the Tunisians had great hope for the future and, although Independence is new to them after centuries of conquest and colonialism, they remain charmingly cosmopolitan in their outlook and are refreshingly friendly and hospitable to the world at large."



*In this photo, taken by Capt. Bullock, Mrs. Bullock and her sister pause in the Casbah area of Tunis.*

*Dans cette photo prise par le capitaine Bullock, on aperçoit Mme Bullock en compagnie de sa sœur dans la casbah de Tunis.*



# *l'avenir des transports*



D'ici une trentaine d'années, si l'on en croit les spécialistes, nos modes de transport auront été à tel point transformés que nos enfants auront peine à croire qu'en 1968 on pouvait alors prétendre vivre dans un siècle qu'on se plaît à appeler celui de la vitesse.

Le «Rapido», l'automobile à 100 milles à l'heure, le turbotrain, l'avion à 600 milles à l'heure et les autres véhicules rapides de nos temps modernes auront pour la plupart passé à l'histoire, et certains d'entre eux seront peut-être même devenus des articles de musées.

Il y a quelques mois, le ministre des Transports, M. Paul Hellyer, parlant de l'avenir des transports, faisait, par exemple, allusion à des trains qui pourraient filer à 2,000 milles à l'heure ou plus dans des tubes où l'on aura fait le vide. Il ajoutait qu'on verra sans doute le jour où l'on pourra se déplacer en ville par exemple sur des trottoirs mobiles munis de sièges. Un hovercraft sur rail pourra nous transporter à vive allure sur des distances de 500 milles et plus, et, en l'an 2,000, l'avion hypersonique filant à des vitesses trois ou quatre fois plus grandes que la vitesse du son aura sans doute fait son apparition.

Ainsi donc, peu importe le mode de transport auquel on s'intéresse—que ce soit par mer, par air ou au sol—les perspectives sont attrayantes et le défi à relever en est un auquel on a peine à résister.

Au Canada, particulièrement au cours des dernières années, on a créé les mécanismes qui nous permettent de participer activement à cette évolution et même, dans certains cas, de devancer les progrès de façon à doter le pays des services et installations qui seront requis pour assurer le développement rationnel de tous nos modes de transport.

La Commission canadienne des transports, créée au lendemain de l'adoption de la nouvelle Loi nationale de 1967, est l'outil indispensable qui servira à coordonner nos services. Elle a pour tâche

principale d'assurer au Canada un système de transports à la fois économique, efficace et adéquat.

Par ailleurs, au ministère, la Direction des méthodes et recherches en matière de transport poursuit des études approfondies sur tous les aspects de la question. Ce service a publié récemment un bref rapport qui nous donne un excellent aperçu de ce que les trente prochaines années nous réservent dans le domaine des transports. Pour le bénéfice de nos lecteurs qui n'auraient pas eu l'occasion de prendre connaissance de ce document, nous reproduisons ici quelques extraits de cette étude.

«La population du Canada passera vraisemblablement, au cours des trente prochaines années de 20 à 35 ou 40 millions. Les migrations vers les centres urbains se continueront, de sorte que, vers la fin de cette période, 80% des Canadiens vivront dans des cités, et toute l'étendue qui sépare les villes de Windsor et de Québec pourrait n'être qu'une vaste suite d'agglomérations. Il y a donc lieu de se préoccuper en premier lieu du transport local.

«L'automobile constitue le facteur dominant du transport urbain. Toutes les transformations dans ce domaine gravitent autour des augmentations ou diminutions de son utilisation et autour des moyens susceptibles de les modifier. La valeur des tentatives faites récemment pour apporter des solutions aux problèmes imputables à la voiture en construisant des voies de plus en plus complexes, susceptibles d'en permettre le libre usage, a été contestée tant du point de vue économique que sous le rapport de l'esthétique.

«On se rend compte, bien tardivement, que la voiture possède une prodigieuse puissance de destruction et qu'en essayant d'adapter les villes aux impératifs de ce moyen de locomotion on risque fort d'anéantir ce qui fait précisément leur charme.

«Cette constatation a provoqué un nouvel intérêt dans les transports urbains en commun, particulièrement au centre des agglomérations où la superficie relativement restreinte qu'exige cette forme de transport, soulage quelque peu l'encombrement fantastique qui existe dans ces secteurs.

«Certains indices permettent de penser que le déclin des transports urbains en commun s'est arrêté. Plusieurs villes ont repris l'étude de ce genre de transport, notamment pour répondre à la demande des heures de pointe du matin et du soir. Cette tendance va probablement s'accroître en raison de l'augmentation prévue du nombre des automobiles.

«Deux villes canadiennes, Montréal et Toronto, et plusieurs villes américaines ont tenté d'échapper à cette congestion des rues et des routes aux heures de pointe en construisant des chemins de fer métropolitains à grand rendement qui assurent un service rapide et confortable à l'intérieur des centres urbains et jusque dans les banlieues.

«Les variantes des services de banlieue habituels auront peut-être des wagons plus légers et des structures moins massives ou prendront la forme de lignes d'autobus roulant sur des voies qui leur seront réservées.

«La mise au point de véhicules à conduite automatique, sans conducteur, utilisés seuls ou en groupes, permettra peut-être d'exploiter économiquement des transports en commun là où le volume du transport est faible.

«Les automobiles seront donc plus nombreuses à la campagne pour des voyages d'agrément ou des visites comportant des déplacements de courte ou de moyenne distance, mais dans les villes particulièrement en ce qui concerne les parcours quotidiens vers le travail et retour au foyer, les modes de transport en commun, modernes et économiques, semblent devoir l'emporter

sur les voitures particulières. Telle sera probablement la transformation la plus marquée du mode de transport urbain au cours des trente prochaines années.

Pour ce qui est des déplacements interurbains, on peut prévoir que l'automobile privée demeurera le véhicule principal, même pour les longs trajets, mais cédera beaucoup de terrain aux autres véhicules de surface et aux avions.

### **Le transport aérien**

«On s'attend que la croissance rapide du transport aérien persistera surtout en ce qui concerne les distances de plus de 600 milles. Certains avions spécialisés ont déjà fait leurs débuts dans les lignes aériennes du Canada soit, entre autres, le DC-8 à fuselage allongé, d'une capacité d'environ 200 passagers. Dans un avenir prochain le Boeing 747 pouvant transporter 490 passagers et, plus tard, un avion de 900 places desserviront les longs trajets aériens nationaux et internationaux.

«Dans les dix prochaines années, les compagnies aériennes canadiennes mettront en service des appareils supersoniques qui réduiront de moitié la durée des trajets.

«On améliorera les dispositifs qui facilitent la navigation pour permettre les atterrissages aux instruments des avions de ligne d'ici dix ans, et les retards dus aux conditions atmosphériques seront un phénomène du passé. L'aide de cerveaux électroniques et la surveillance au radar ajouteront à la sécurité et à l'efficacité du contrôle de la circulation aérienne.

«D'ici trente ans peut-être, la navigation aérienne sur plusieurs itinéraires canadiens sera complètement automatique du décollage à l'atterrissage. Des cerveaux électroniques programmeront le voyage en entier, y compris le plan de vol et l'embarquement des passagers.

«Le transport en surface aller-retour entre les villes et les aéroports deviendra





vraisemblablement plus rapide. Des monorails perfectionnés ou des véhicules circulant dans un tunnel tubulaire offriront peut-être la solution souhaitée.

«La circulation interurbaine par autobus n'a guère ou n'a pas du tout augmenté depuis plus de quinze ans et restera sans doute à son niveau actuel pendant quelque temps encore.

«Ce sont les locations de véhicules et les voyages organisés qui constitueront peut-être les plus importants facteurs d'augmentation de la circulation par autobus au cours des trente prochaines années. Cependant, le service de transport rapide des colis constitue une activité auxiliaire prospère pour les compagnies d'autobus, et il est probable qu'il prendra de plus en plus d'importance.

#### Les chemins de fer

«Les chemins de fer effectuent environ 42% du transport (calculé en tonnes-milles) des marchandises entre les villes canadiennes; les navires, 27%; les gazoducs et oléoducs, 22%; les camions 9%, et les avions, moins de 1%. Les trois premiers constituent les principaux transporteurs de cargaisons lourdes en vrac sur de longs trajets et le demeureront au moins au cours de la prochaine génération. Pour chacun des trois, la croissance du trafic se poursuivra, mais leurs pourcentages peuvent changer et leur ordre d'importance aussi. Le rôle qui peut être dévolu au transport des solides par pipe-line demeure un grand point d'interrogation.

«Le transport de marchandises par chemin de fer présente, dans l'ensemble,

une image plus progressive que le service des passagers. Ici, les avantages, technologiques relatifs des chemins de fer sont plus prononcés et leur permettront de mieux concurrencer les moyens de transport rivaux.

«Il y aura cependant une évolution importante dans le type de service offert aux transporteurs de marchandises et dans les méthodes et moyens utilisés par ce service.

«Pour les marchandises en vrac en particulier, des wagons de grande capacité, conçus pour des denrées ou services spéciaux et équipés pour des méthodes spécialisées de chargement et de déchargement rapides, seront accrochés d'une façon permanente en trains ayant leur propre locomotive. Ces transports feront de plus en plus l'objet de contrats spéciaux à long terme, à des tarifs-marchandises convenus.

«De plus en plus de voitures spécialisées de toutes sortes, d'affectation restreinte, remplaceront les vieux wagons à tout faire ordinaires.

«Des efforts considérables seront faits pour réduire les voyages à vide et pour augmenter la fréquence des voyages en supprimant les opérations de triage et en faisant circuler les trains en circuit fermé ou directement de gare à gare lorsque c'est possible. Lorsque le triage sera nécessaire, de nouvelles gares, maintenant conçues dans ce but, réduiront les retards et élimineront les erreurs de classification.

«Une nouvelle signalisation électronique centralisée réduira la main-d'œuvre, permettra aux trains de circuler à une plus grande vitesse en toute sécurité et

augmentera de beaucoup l'utilisation des voies ferrées.

«Les progrès mécaniques du matériel roulant, des locomotives plus puissantes, des coussinets à rouleaux et l'augmentation de la charge utile par rapport à la tare se conjugueront pour permettre de mettre en service des trains plus rapides, plus utiles et améliorer également l'utilisation du matériel.

«Certains indices laissent prévoir que, dans les deux ou trois prochaines décades, nous verrons un autre progrès: celui de la turbine à gaz. Actuellement, des problèmes techniques empêchent son application à grande échelle aux services des lignes principales, mais ses avantages: rapport puissance-poids élevé, possibilité d'éliminer les pannes et frais d'entretien peu élevés, en feront presque, à coup sûr, une machine de premier ordre pour les services ferroviaires dans le proche avenir.

#### Le transport par eau

Au chapitre des transports par eau, la tendance moderne est aux gros transporteurs de denrées en vrac. Nos voies navigables devront donc être sensiblement améliorées pour livrer passage à ces navires.

«Une nouvelle écluse américaine à Sault-Sainte-Marie permettra le passage de bâtiments transportant plus de 40,000 tonnes, et ceci n'est pas la limite extrême. Des écluses plus larges seront nécessaires dans les canaux de Welland et du Saint-Laurent.

«Le commerce océanique de denrées solides en vrac indique une tendance



accélérée à l'utilisation de gros transporteurs capables de transporter éventuellement jusqu'à 200,000 tonnes et plus.

«De tels navires seront peut-être bientôt importants pour nos exportations de blé, de minerai de fer, de charbon, de potasse et d'autres produits en vrac. Il sera donc opportun de faire en sorte qu'il y ait des ports canadiens munis de postes d'amarrage assez profonds et d'installations portuaires suffisantes pour ces navires.

### Les solides par pipe-line

«Alors que les hydrocarbures liquides et les gaz demeureront sans aucun doute les denrées principales transportées par pipe-line jusqu'à la fin du siècle actuel, des découvertes majeures dans la technologie du transport des solides par pipe-line devraient se produire au cours de cette période.

«Ceci implique le déplacement des solides dans un véhicule généralement liquide, mais qui peut être de l'air. Il y a actuellement un certain nombre de ces lignes exploitées commercialement au Canada; la plupart sont installées dans des usines, et toutes sont relativement courtes. Cependant, les essais se poursuivent en vue de trouver des méthodes économiques pour transporter les solides par pipe-line et plusieurs méthodes ont été étudiées.

«La méthode qui semble la plus prometteuse implique le mouvement de solides dans un courant de fluide au moyen de capsules qui sont ou bien imperméables au fluide ou enfermées dans un récipient. Le liquide ou fluide dans lequel se déplace le solide peut aussi avoir des répercussions sur l'économie, puisque ce produit, qui a lui-même une valeur commerciale, par

exemple le pétrole, fournirait un revenu supplémentaire à la compagnie exploitant le pipe-line.

«On a suggéré plusieurs denrées qui seraient susceptibles d'être transportées par pipe-line au Canada, notamment la potasse, le soufre, de nombreux minerais et même le grain. La denrée pour laquelle cette possibilité est la plus étudiée est probablement la potasse de la Saskatchewan dont l'exploitation minière n'a débuté qu'au cours des dernières années mais pour laquelle on prévoit une production de 10 millions de tonnes en 1970 et peut-être le double ou le triple dix ans plus tard.

«Un autre projet envisagé concerne le transport par pipe-line du soufre, extrait du gaz naturel de l'Alberta, à la côte du Pacifique. Ce soufre, qui n'était qu'un déchet il y a seulement quelques années, est devenu l'une des principales exportations canadiennes du fait que l'offre en devient de plus en plus insuffisante sur le marché mondial.

«Alors que la réalisation de ces projets aurait une incidence considérable sur l'économie canadienne, le développement du transport par pipe-line des minerais et du grain serait révolutionnaire.

### L'industrie du camionnage

«L'industrie du camionnage devrait plus que doubler le volume de ses transports au cours des trente prochaines années. La construction de routes plus larges permettra de mettre en circulation de plus grosses remorques qui serviront à améliorer et à accélérer le chargement des denrées, chose particulièrement importante pour les charges partielles et les petites expéditions dont l'ensemble constitue le gros du marché du camionnage.

«Les tracteurs à turbines à gaz et leurs trains de remorques, qui circuleront sur les nouvelles autoroutes à quatre ou six voies et à accès contrôlé, constitueront une innovation révolutionnaire.

«L'utilisation des contenants devrait augmenter. Cela accélérerait l'expédition des charges partielles, en particulier lorsque le camionneur alimente une compagnie de navigation ou un chemin de fer.

«Comme dans la plupart des services du secteur tertiaire, une large part du revenu du camionneur lui sert à payer les «salaires» de son personnel; un grand nombre des travailleurs qu'il emploie sont affectés à la manutention du fret sur le quai de la gare. C'est l'un des endroits que les progrès techniques sont en train de transformer. Au nombre des innovations à l'essai, il y a les élévateurs à fourches, les tapis roulants, le triage automatique et les corbeilles de chargement.

«Le volume actuel des transports de marchandises par voie aérienne est encore relativement faible, mais il augmente rapidement. Les établissements commerciaux commencent à s'apercevoir que le transport aérien permet de réduire le total des frais de distribution d'articles de plus en plus divers, et des réactés géants, dont on est en ce moment en train de dessiner les plans, pourraient transporter en une semaine autant de fret que le fait dans le même temps un paquebot de bonne taille. Les transporteurs aériens prévoient que leurs recettes de transport du fret dépasseront, vers 1980, celles du transport des passagers.»

«Voilà donc, en résumé, le défi que la génération actuelle est appelée à relever dans un monde où nos services en matière de transport sont au seuil d'une expansion sans précédent dans l'histoire du pays.





# le projet Mosquito



*The Mosquito at Uplands.  
Le «Mosquito» à Uplands.*



*Unloading the aircraft at Kapuskasing.  
L'appareil démonté arrive à Kapuskasing.*

Un projet initié par les cadets de l'Air de Kapuskasing est en train de susciter presque autant d'enthousiasme dans cette petite ville de l'Ontario-Nord que la «Terre des hommes» et ses attractions peuvent en faire naître chez la population montréalaise.

Les 76 cadets, membres de l'Escadrille 647, ont en effet entrepris, avec le concours et l'encouragement de spécialistes de l'aviation, la reconstruction d'un «Mosquito», petit appareil de guerre qui a laissé sa marque au cours du dernier conflit mondial.

Sous l'œil approbateur de leur instructeur en chef, l'officier d'aviation Don Campbell, les cadets, stimulés par l'entraînement et l'intérêt de la population de Kapuskasing, travaillent d'arrache-pied à leur projet depuis déjà plus d'un an.

Le ministère des Transports, par l'entremise de son sympathique gérant d'aéroport à Kapuskasing, M. Bob Laberge, prête également son concours à la réalisation du projet. Le travail de reconstruction se poursuit en effet dans un atelier construit par les cadets eux-

mêmes sur un emplacement réservé à cette fin sur les terrains de l'aéroport.

C'est en décembre 1966 que les cadets ont réussi à mettre la main sur un vieux «Mosquito» délabré qu'on destinait au rebut. L'appareil, propriété de Spartan Air Services, à Ottawa, reposait, abandonné à son sort, dans un champ à l'arrière du hangar de Spartan à Uplands. En moins de cinq jours, le «Mosquito» a été démonté et chargé à bord d'un camion-remorque qui l'a transporté d'Ottawa à Kapuskasing.

L'appareil a d'abord été remis à l'aéroport de Kapuskasing pendant l'hiver, puis, dès l'arrivée du printemps, les cadets ont commencé la construction de leur atelier, selon des plans et devis tracés par Bill Swann, ancien pilote de la RAF et maintenant ingénieur à l'emploi de l'usine locale de pâte et papier. L'atelier, mesurant 64 pieds de largeur par 24 de longueur, a été construit en dix semaines. Voilà un exploit en lui-même, puisque les jeunes ne s'adonnaient à ce travail que durant leurs heures de loisir, soit le soir et durant les fins de semaine.

Au mois d'août de l'an dernier, on s'est enfin mis à la tâche de reconstituer le «Mosquito». Chaque pièce, de l'appareil, depuis la queue jusqu'au nez, doit être minutieusement nettoyée, retouchée, réparée et enfin remise en place.

Le but premier était de reconstruire l'appareil pour en faire un objet d'exposition ou un monument quelconque. Un examen des moteurs a cependant révélé qu'ils sont encore en bon état de fonctionnement. Les cadets entrevoient donc maintenant la possibilité de reconstituer un modèle qui pourra voler. Ceci, évidemment les incite à redoubler d'ardeur au travail, car ils nourrissent maintenant l'espoir de voir un jour leur chef-d'œuvre reprendre la voie des airs.

Si donc vous voyez bientôt un «Mosquito» dans le ciel de Kapuskasing, vous saurez que les cadets ont enfin complété leur projet.

# the Mosquito project



The cadets build a workshop.  
*Les cadets construisent leur atelier.*



Young mechanics at work.  
*Les jeunes mécaniciens à l'œuvre.*

An idea initiated by a group of cadets in Kapuskasing is having much the same effect on this northern Ontario community as *Man and His World* had on Montreal last year.

The 76 cadets, members of 647 Squadron, are rebuilding a "Mosquito" bomber with the help and encouragement of aviation experts and most of the local townsfolk.

Under the watchful eye of their chief instructor, Flying Officer Don Campbell, the cadets have been hard at work on the project for more than a year.

It all started back in December 1966 when the cadets succeeded in obtaining an old Mosquito which lay abandoned in a field behind the hangar of Spartan Air Services in Ottawa.

In less than five days after it was acquired, the Mosquito was dismantled and loaded aboard a transport for the long journey from Ottawa to Kapuskasing.

The aircraft's arrival caused a great deal of interest in "Kap" and most of the town turned out to see what could

be done with the aircraft.

"In a case like this," said Flying Officer Campbell, "there is very little that the Department of Transport could possibly do materially to aid such a project—or at least it would seem that way."

"But, in the field of understanding and co-operation, much was done," he said.

It stands to reason that the best place for an aircraft is an airport and, as there was an unused corner of Kapuskasing Airport ideally suited for dead storage, Airport Manager Bob Laberge suggested that the Mosquito be unloaded there.

With the arrival of spring, the cadets began work on a hangar-workshop on land belonging to the department with the aid of donated material and Bill Swann, a former Royal Air Force pilot who now works as an engineer at the local pulp and paper mill.

The structure, a 64-foot by 24-foot building, was put together in 10 weeks and work on restoration of the Mos-

quito got underway in earnest.

The aircraft was torn down and rebuilt from nose to tail with every removable part carefully cleaned, retouched, repaired and returned to its place.

The original purpose of the project was to restore the aircraft for use as a static exhibition piece or a monument before an examination of the Mosquito's engines showed that they were still in good condition.

The cadets were faced with the realization that their project might one day take to the air again.

It was enough, as F/O Campbell points out, to make them redouble their efforts.

And so, if you're in the Kapuskasing area and happen to see a Second World War bomber complete with wartime configuration, coloring and markings streak across the sky, you will know that what you are seeing is probably what has come to be known as "The Mosquito Project."



electronics in the ice packs

.. or ..

harry and the midnight sun

.. or ..

90 days (and fewer nights) on an icebreaker



An ocean cruise took Harry White, 32, of Twillingate, Newfoundland, into a part of Canada few of us know, where polar bear and walrus frequently approached his ship without fear.

Harry's earlier career was with Marconi, beginning at famous Signal Hill, Newfoundland, where Marconi first made radio contact with Europe, and continuing as a radio operator in several other locations until DOT took over Marconi's communications system in Canada. He served DOT at Goose Bay, Sept-Iles, and a few other stations before this assignment.

He now is serving with CCGS John Cabot, the only combined icebreaker and cable repair ship in the world.

by William Dunstan  
Information Services Division

For about four months last year, telecommunications technician Harry White was on duty 24 hours a day. And that's how long some of the days were, for he was aboard the icebreaker CCGS *Labrador*, far up in the Arctic Circle under the midnight sun.

He did get sufficient sleep, for the most part, but as the only technician aboard responsible for maintenance of the ship's electronic and radionic equipment, he was always on call.

Apart from the ship's engines, he had responsibilities for almost every functional device on board ship: radio beacons which provided homing devices for helicopters attached to the ship; fixed and portable radio communications systems by means of which the ship keeps in touch with the rest of the world; radar systems which help the ship to navigate; a direction-finding system which takes bearings on land stations; Decca and Loran, two long-range direction-finding systems; the gyro-compass, and a facsimile system which receives and prints out weather maps.

In addition to all this, he had to find time to keep a watchful eye on a precocious infant of a long-range navigation system—the Omega, which provides navigation and position details at ranges up to 6,000 miles. Operation of this instrument on the *Labrador* provided enough information to warrant further investigation of the system by Telecom's research and development group in areas where no studies have hitherto been performed. His model was the latest state of the art, all solid state (transistor or micro-circuits). When time was available, Harry plotted position by Omega and checked the result with the ship's recorded position.

The ship's main purpose, like that of other D.O.T. icebreakers which travel in the Arctic, was to lead vessels through ice packs and come to the assistance of any in distress. It also carried supplies for some of the outposts.

Except for ports-of-call, Harry's community consisted of a 125-man crew and 14 cadets. Lonely? Boring? Not necessarily. There was a fairly steady round of ping-pong, darts, cards, and bingo. Films also were an important part of the routine; one of the first questions asked when making contact with another ship was "have you any films to trade?"

Harry, a ham radio operator from away back, had a special card up his sleeve—he brought his radio station with him! In addition to talking with his fellow hams in various parts of the world, he did some 40 "telephone patches" for himself and other crew members. A "patch" was made by contacting a friendly ham operator in Twillingate, Newfoundland, where Harry's wife and child lived, or in the hometown of a crew member. The ham simply dialled the required number and connected his set to the telephone.

The cruise took the *Labrador* far into the high Arctic and well into the eastern Arctic. Near Resolute Bay, it refuelled CCGS *John A. Macdonald* prior to that ship's dramatic voyage high into the eastern Arctic where, with the aid of an American icebreaker and guided by D.O.T.'s own ice-reconnaissance aircraft, it rescued the American ship *Northwind* from solid polar ice and in so doing traversed the northwest passage.

Ice in great variety and, often, great beauty is an unforgettable part of such a



voyage. One of the most interesting ports-of-call was Cape Dorset, which Harry found to be quite a modern settlement. There he and other members of the crew bought some of the famous soapstone and ivory carvings by Eskimo artists.

The wildlife in the northern wastes was fascinating. Mushow, wolves, bird-life showed no fear of man. In fact the polar bears stood firm on the ice floes as the ship approached, occasionally taking a swipe at the iron monster that was invading their territory.

An unusual assignment was a trip to Eureka to capture nine muskox calves. A university professor planned to try domesticating these animals, the wool of which is said to be worth as much as \$50 a pound. Unfortunately he lost a helicopter in seeking to catch some, so the *Labrador* was pressed into service.

Fortunately one the crew was the sort of "typical" westerner who is quite rare these days—he could use a lasso. The nine young muskox were taken aboard and transported away down south to Fort Chimo for the professor's experiment.

The *Labrador* frequently does hydrographic work and on its way back it spent a week with the Bedford Institute of Oceanography, checking ice-blasting methods by means of a seismic recorder. It also made a short survey of ice conditions for fishermen in the area.

Harry left on July 16 and returned October 14 from a voyage into the high Arctic—one of the relative few to have personal experience with that vast, little-known territory that is nevertheless an important part of Canada.



# transport in the economic evolution of Canada

by Pierre Camu

Chairman, St. Lawrence Seaway Authority

*Recently, the magazine "Transports," voice of the French Transportation industry, took a look at transportation in Canada in a special issue published to mark the Centennial of Canadian Confederation. The result was a series of stories written by Canadian authorities on the subject, one of which is reprinted here with the kind permission of the author.*

In a country the size of half a continent—for we share North America with our neighbours to the south, the United States of America—under severe climatic conditions which vary not only from one region to another but also from morning to night, with a highly urban population unequally distributed over a three-hundred kilometre-wide strip north of the Canadian-American border, with abundant raw materials which are concentrated in different regions of the territory, transportation has played an essential role in the economic development of Canada.

For more than four hundred years, since the discovery of the country by Jacques Cartier, among the modes of commercial transportation, one has always been a leader.

Under the French regime, from 1534 to 1760, water transport was the only commercial means of transport. Sailing ships which arrived from the ports of the mother country went up the Saint Lawrence as far as Quebec, then up to Trois-Rivières and Montreal. From those three river ports, by a birchbark canoe adopted from the Indian, a large part of the North American continent, including the Saint Lawrence and Mississippi Basins, was first explored. As a result of the explorations, the fur trade was established and organized on a commercial basis with forts and trading posts well situated at strategic junction points or below and above rapids and falls. Between the river-side regions of the lower Saint Lawrence and Acadia, including the Annapolis Valley and Port Royal, communications and trading were done by ship. Intendant Jean Talon recognized the importance of that means of transport by fostering the establishment of shipyards.

In 1663, the first ship built at Quebec was launched, an event which marked the beginning of the building of wooden vessels, an industry which prospered until approximately 1860-1870, then experienced a natural decline due to the advent of the first steel hulled vessels. After a period of readjustment, the construction of steel vessels was started. That industry has continued to expand to

the point where, today, it constitutes one of the most important activities in Canada.

It was also by ship that British explorers and merchants entered Hudson Bay and penetrated into the interior of the country to organize the fur trade there. The results of the Seven Years' War (1760) changed the political allegiance but water transport continued to provide the indispensable links between the populated sections of the continent. After the fur trade came the lumber trade.

At the end of the Eighteenth Century, it was realized that the large navigable waterways had to be further improved. Then began a very active period of canal construction along the St. Lawrence. A little later, below Montreal, the *Accommodation*, the first steamship to sail on the St. Lawrence, was launched in 1809; in 1817, the *Frontenac* became the first steamship to ply the Great Lakes.

On the other hand, almost everywhere, carriage roads appeared between the main towns, to such an extent that at the beginning of the nineteenth century, it was possible to travel by coach from Quebec to York (Toronto) and to Boston in New England. The systematic construction of provincial roads began after the War of 1812. In spite of all those developments, water transport each year had to cease from November until the end of April because of ice. Only the ports along the Atlantic Coast remained open in all seasons. The road network was still very primitive and unusable during certain seasons. Therefore, the construction of the first railway in Canada is an extremely important date in our history of transportation. In 1836 when the first train travelled between Laprairie and Saint-Jean in Quebec, on that day an answer was found to the problem of offering a safe and efficient means of transport in all seasons.

It was not until 1850 that the construction of a railway network was really begun with respect to the population which was concentrated in the southern parts of Ontario and Quebec, in the Maritime provinces and in the areas

where the industrial revolution had taken root. Certainly, ships continued to provide the maritime links with foreign countries and the river-side regions still not served by rail. However, the railway as a factor of both territorial expansion and consolidation was to play its greatest role at the time of the construction of the Canadian Pacific Railway to the West. In 1885, it was finally possible to get to British Columbia and the Pacific Coast. Thus the railway, starting at Winnipeg which was the great turntable, opened up vast open spaces to settlement and grain growing. After the fur and lumber age came the wheat age.

During the second half of the nineteenth century, the ship-owners in the Saint Lawrence ports, especially those of Montreal, in order to preserve the advantage acquired through ships, had the channel deepened below Montreal. On the other hand, upstream, the Government undertook the construction of new four metre deep canals. This system was to remain in use until the opening, in 1959, of the St. Lawrence Seaway, as it is known today. There was a considerable development of the commercial ports on the Great Lakes, the St. Lawrence and the Atlantic Coast.

Before the railway network widened its ramifications and monopolized the transport of persons and goods, the automobile appeared on the streets of Toronto, Montreal, Ottawa and Quebec. The First World War (1914-1918) marked the end of the great period of railway construction in the country and the beginning of the expansion of highway networks. This expansion was, of course, complementary to the extraordinary advance of the automobile, truck and bus, a typical North American phenomenon. Therefore, after 1920, the automobile proved a direct threat to railways; it gives Canadians a second inland transportation network, open twelve months a year, efficient and linking the remotest hamlets and villages.

In the period between the two wars, the airplane had made it possible to explore the valleys of the Mackenzie, the Yukon and the lakes of the Northwest

Territories. The pilots of the Canadian Arctic earned an enviable reputation for themselves. During the Second World War (1939-1945), military aviation made enormous progress. It was therefore normal that with the return of peace, such aircraft were adopted for commercial needs. Everything was done at the same time in the field of air transport in Canada after 1945; airports were constructed, aviation companies were founded, air links abroad were established and the exploration of Canadian Arctic territories was completed. It is sufficient only to recall large Canadian companies like Air Canada, which celebrated its twenty-fifth anniversary in 1962, as did Canadian Pacific a few months ago, to understand that the growth of commercial aviation corresponds to the most diversified and most industrialized economic development phase that the country has known. The airplane was the first mode of transport which did not obey the geography of the country.

It was during the fifties that special rail lines were constructed; they were special in the sense that they were constructed between the ports of the Gulf of St. Lawrence and the iron mines of Newfoundland and New Quebec. That major regional economic development was linked with the opening of the Seaway and with the supplying of iron ore to the smelting industries of the Great Lakes.

In order to better evaluate the role which each of the main modes of transport plays today, we give the following table:

**Percentage of Interurban Traffic by Mode of Transport**

	1938	1941	1951	1956	1965
Water ....	42.2	27.4	24.5	23.8	26.5
Rail .....	54.7	69.5	63.8	55.8	41.8
Highway	3.1	3.1	8.2	7.5	9.3
Air .....	.....	.....	.....	.....	.....
Pipeline ..	.....	.....	3.5	12.9	22.4

SOURCE: Dominion Bureau of Statistics.

These percentages represent only one type of commercial traffic; if farm truck traffic, private truck traffic, private automobiles carrying travellers across the country were added to them, it is obvious that the highway represents a high percentage of the total traffic today.

Nevertheless, rail and water continue to occupy a preponderant position. Water transport since the opening of the Seaway in 1959 has won a few points and retains its share of the traffic; railways however, are declining and are losing ground. Pipelines have captured a large share of the oil and natural gas traffic; it is the mode of transport which has experienced the greatest gains during the past fifteen years.



An artist paints CCGS D'Iberville and CCGS Montcalm as they navigate the Cote St. Lambert Lock following the opening of navigation on the St. Lawrence Seaway, April 25, 1959.



# RETIREMENTS

## J. Roy Baxter

J. Roy Baxter, D.O.T. Representative in London, England, for the past two years, has retired after nearly 44 years in the government service.

Born at Carleton Place, Ont., in 1907, Mr. Baxter received his education in Smiths Falls and Ottawa.

He entered government service in 1924 with the Department of Colonization and Immigration and transferred to the Canadian Travel Bureau in the Department of Railway and Canals in 1934.

In 1936, he joined the personnel division of the newly formed Department of Transport, his first task being the administration of personnel for Air Services.

In 1948, he was appointed chief of personnel; in 1954, director of personnel and information services; in 1955, director of administration and personnel; and in 1956, assistant deputy minister, personnel and administration.

Mr. Baxter is a past president and co-founder of the Public Personnel Institute and a past president and co-founder of the Civil Service Recreational Association.



J. Roy Baxter

## W. A. Caton

A man who joined the D.O.T. as a radio operator and went on to serve 44 years in radio regulations has retired from active service.

W. A. Caton, controller of the radio regulations division for the past 10 years, was honored by his colleagues at a reception held in Ottawa's RA Centre late in June.

Prior to joining the department, Mr. Caton was engaged in private radio work at Napanee and later was with the Royal Canadian Corps of Signals at Ottawa and Camp Borden.

After joining D.O.T. in 1924 as a radio operator, he was stationed at Chubbuck Head direction finding station.

In 1925, he became a radio inspector working out of Halifax and then spent 11 years in the Toronto area.

In 1937, he was appointed to radio headquarters in Ottawa.

Interesting events in Mr. Caton's career in radio included taking part in the technical arrangements for the first trans-Canada radio broadcast in 1927, taking charge of all radio arrangements in connection with the Royal visit of 1939, completing a survey of West Coast marine radio coverage in 1950, and inflight inspection of aeronautical radio facilities on the South Pacific route to Australia in 1952.

Hobbies play an important part in Mr. Caton's home life. In addition to being an ardent electronics fan specializing in classical music, he does wood and metal work in his basement workshop and goes in for skiing and fishing when opportunity permits.



W. A. Caton

## Mrs. V. G. Parsons

A lady who served 23 years in the Bureau of Telecommunications and Research has retired.

Mrs. Vera G. Parsons was presented with a leather French-style wallet containing the contribution of the staff of the division at a small gathering held in her honor late in April.

## William Boyd

About 125 D.O.T. employees and their guests attended a party at Schofield Hall last April 30 to honor William Boyd, who is retiring from his position as technical supervisor in the engineering section of the Victoria Marine Agency.

Like many technically-minded young Scotsmen, Bill Boyd went down to the sea in the bowels of ships. One of his early voyages took him into the Arctic in the old Hudson Bay vessel *Bay Chimo*. Prior to and during the war, he served as chief engineer in a number of CPR and park steamship vessels.

However, he finally got "fed up" with trying to keep some of the "old tubs" going and came ashore to help smash them up.

Deciding that he had gone from one extreme to another, he looked around for "an up and coming outfit" and in 1950 joined the Department of Transport.

During the past 18 years, Bill has served the Department well and has risen to the position of technical supervisor marine aids. Bill's ability in restoring aids to navigation to operation is highly respected by all his co-workers and was ably demonstrated when the station at Pine Island was severely damaged by storm in February, 1967, and Bill and his crew restored the light and foghorn to operation within hours.

Bill is known as "Tropical Boyd" amongst Coast Guardsmen because they usually enjoyed good weather whenever he came aboard.

In the course of his work servicing aids to navigation, Bill has experienced some bad landings at isolated lightstations. On one occasion at Cape Scott, he fell overboard but was able to flap his arms back and forth with such rapidity, according to reports, that only his ankles and feet were still in the chilly water when the boat came alongside to pull him out.

Bill is an avid golfer and football fan who says he plans to fully enjoy his years of retirement with his wife, Martha, at their home in Victoria.

## W. G. Pretty

William George Pretty has retired from the Department of Transport after 22 years of service in the supply division.

Born at Ashton, Ont., Mr. Pretty began his career as a clerk and cloth inspector with Renfrew Woollen Mills at Carleton Place, Ont.

Following service with the Canadian Army overseas in the Second World War, Mr. Pretty joined the Department of Transport as a clerk in the supply division where he remained until his retirement.

Mr. Pretty was honored on the occasion of his retirement at a small ceremony arranged by his friends and colleagues including L. H. Russett, chief supply officer with D.O.T.

## H. M. Cox

Henry Maurice Cox, a veteran of 44 years of government radio service, has retired from the Department of Transport.

Mr. and Mrs. Cox were honored May 1 at a small gathering held in the office of W. A. Caton, controller of radio regulations, who presented them with flowers and gifts on behalf of the staff.

Mr. Caton told the guests how he and Mr. Cox had started their careers as radio operators in 1924 and outlined some of the details of Mr. Cox's lengthy career.

During the course of his service, Mr. Cox served aboard the old Lurcher Lightship in Nova Scotia, at Camperdown and Chebucto Head, N.S., at Cape Race and Belle Isle in Newfoundland, and aboard the Canadian Government Ship *Montcalm*.

Later Mr. Cox was appointed as a radio inspector at headquarters and went on to become a technical officer in the radio regulations division, the position he held until his retirement.



Mr. and Mrs. Cox and W. A. Caton



## **Stuart T. Grant Named to United Kingdom Post**

Stuart T. Grant, 45, former superintendent of aviation emergency planning, has taken up his duties as Department of Transport Representative in London, England.

Mr. Grant replaces J. Roy Baxter who has retired from government service after nearly 44 years.

A native of Toronto, Mr. Grant received his early education there and later attended Carleton University. He served with the Royal Canadian Air Force during the Second World War as a coastal command pilot and now holds an airline transport licence.

He joined the federal Department of Transport in 1948 as an inspector of air regulations in the Toronto region. In 1950, he was transferred to Ottawa where he has filled a variety of staff appointments, including that of executive pilot with the department's flight services division.

Mr. Grant was appointed superintendent of aviation emergency planning in 1965 and since then served as the member representing Canada on the All Weather Operations Panel at the International Civil Aviation Organization in Montreal.



*S. T. Grant*

## **A. L. Peel Appointed to Research Position**

A. L. (Sandy) Peel has taken over the post of Chief Economist, Railway and Highway Division, Transportation Policy and Research Branch.

Mr. Peel succeeds H. B. Neilly, who has been appointed to the staff of the Canadian Transport Commission.

A native of Vancouver, Mr. Peel, who is 32, married and the father of two children, received his Bachelor of Commerce degree from the University of British Columbia in 1959, majoring in transportation.

After serving as an economist with Canadian National Railways in Montreal and Pacific Intermountain Express in Oakland, California, he joined the Department of Transport in 1965 as a highway economist in the Railway and Highway Division.

Following a brief leave of absence in 1967, during which he earned his master's degree in Business Administration at the University of California in Berkeley, Mr. Peel rejoined the Department of Transport as Senior Highway Economist.



*A. L. Peel*

# nouveaux navires new ships



## Le n.g.c.c. «Jean Bourdon» est lancé à Kingston

Un nouveau navire hydrographique à deux hélices pour la Garde côtière canadienne a été officiellement lancé aux chantiers navals de Kingston, le 29 mars dernier.

C'est M<sup>me</sup> Maurice Boudreau, épouse du surintendant de l'exploitation et de l'entretien à la Division du chenal maritime du Saint-Laurent, qui a présidé au lancement du «Jean Bourdon», ainsi nommé en mémoire de l'ingénieur et arpenteur qui, à son arrivée en Nouvelle-France en 1634, entreprit les premières études hydrographiques sur le Saint-Laurent.

Le nouveau navire sera utilisé pour des études hydrographiques dans la section du fleuve s'étendant entre Montréal et la mer.

## CCGS «JEAN BOURDON» Launched at Kingston

A new twin-screw survey vessel for the Canadian Coast Guard was launched last March 29 at Kingston Shipyards, Kingston, Ont., with Mrs. Maurice Boudreau of Montreal as sponsor.

Mrs. Boudreau, wife of the superintendent of operations and maintenance, St. Lawrence Ship Channel Division, sent the new ship on its way by breaking the traditional bottle of champagne against its bow.

The vessel was named «Jean Bourdon» in commemoration of the French surveyor and engineer who came to New France in 1634 and carried out the first hydrographic studies on the St. Lawrence River.

The new vessel will be used for survey operations by the Department of Transport's St. Lawrence Ship Channel Division along the river from Montreal to the sea.

The vessel is equipped with the latest navigational aids and communication equipment, including magnetic compass, clear view screen, «River» radar, echo sounder, medium frequency/high frequency/single sideband and very high frequency/frequency modulation radio telephones.

CCGS «Jean Bourdon» was designed by the Montreal firm of naval architects, German and Milne, to requirements set by the Department of Transport Shipbuilding Branch.

## CCGS «TRACY» Christened at Port Weller Ceremony

Mrs. Jean-Pierre Côté, wife of the Postmaster General of Canada, christened the new Canadian Coast Guard ship «Tracy» last April 17 at the yard of Port Weller Dry Docks Limited, Port Weller, Ont.

The ship was named after the Marquis de Tracy, special envoy of King Louis XIV in New France who was responsible for many improvements in the structure and administration of the colony.

The Marquis also directed the construction of forts at Sorel and Chambly and a town across the Richelieu River from the present town of Sorel is named after him.

CCGS «Tracy» is an icebreaking lighthouse and buoy tender and will be

attached to the D.O.T.'s Sorel, Qué., district marine agency.

The ship is a replacement for the old CCGS «Safeguarder» which has reached the end of her economically useful life and is scheduled for retirement from service.

The new ship will be used primarily to service aids to navigation and perform lighthouse supply duties, in addition to functioning as an icebreaking unit in season.

The «Tracy» was designed by Alex C. Campbell and Son, naval architects, in Pointe-Claire, Qué., to requirements specified by the Department of Transport's Shipbuilding Branch.

## Le n.g.c.c. «TRACY»

M<sup>me</sup> Jean-Pierre Côté, épouse du ministre des Postes, a baptisé le «Tracy», nouveau brise-glace baliseur de la Garde côtière canadienne, le 17 avril dernier, au cours d'une cérémonie aux chantiers navals de Port Weller Dry Docks Limited, à Port Weller, Ont.

Le nouveau navire, affecté à l'agence de la marine du ministère des Transports à Sorel (P.Q.), porte le nom du Marquis de Tracy, envoyé spécial de Louis XIV en Nouvelle-France et artisan de nombreuses améliorations dans les installations et l'administration de la colonie. Ce fut le Marquis de Tracy qui dirigea la construction des forts de Sorel et de Chambly. Une ville située de l'autre côté de la rivière Richelieu, en face de la ville de Sorel, porte son nom.

Le «Tracy» doit remplacer le vieux navire «Safeguarder» dont l'exploitation n'est plus rentable. Ce dernier sera bientôt mis à sa retraite.



# TRANS- CANADA

## Aéroport à Chibougamau

Le ministère des Transports consent à affecter la somme de \$223,000 à la construction d'un aéroport public qui sera exploité par la ville de Chibougamau.

Situé au lac Caché, à huit milles à l'ouest de la ville, cet aéroport comprendra une piste de gravier longue de 3,000 pieds, une bande de circulation au sol, une aire de stationnement d'aéronefs et l'éclairage approprié.

Le ministère s'est engagé à financer et à construire l'aéroport. La ville de Chibougamau, de son côté, fournit l'emplacement et se chargera de l'exploitation de l'aéroport dès que la construction sera achevée.

## Canadian Coast Guard College Wins Fire Prevention Award

Ottawa—The Canadian Coast Guard College at Point Edward, N.S., has won the 1967 Howard Green Trophy for the best annual fire prevention program conducted by multi-building Government of Canada installations.

In winning the award, the college was judged the best of 102 entries in this contest division.

The college also placed second in the International Fire Prevention Contest in the Government Division where there were 603 entries from the United States and Canada.

In the Air Services Annual Fire Prevention Contest, Point Edward won the Grand Award for which there were 64 entries and the Class "A" first prize in a field of 15 entries.

The college entry, prepared by Fire Chief George Tellum and his staff, cited a dramatic example of how a comprehensive and interesting year-round fire prevention program can be conducted.

High praise for the college's entry was given by departmental judges, the Department of Public Works (Dominion Fire Commissioner's Staff) and the international judges at the National Fire Protection Association head office in Boston.



**NEW DISTRICT MARINE AGENT**—Jean-Paul Godin, a 45-year-old civil engineer from Ste Foy, Que., has been appointed district marine agent at Québec City. Mr. Godin, formerly district engineer with the Quebec agency, succeeds Captain Georges-Edouard Gaudreau who has retired after more than 40 years of marine service, 23 of them with the Department of Transport.

**NOUVEL AGENT RÉGIONAL À QUÉBEC**—M. Jean-Paul Godin, ingénieur civil âgé de 45 ans, est nommé au poste d'agent régional des Services de la marine du ministère des Transports à Québec. M. Godin, ci-devant ingénieur régional à l'agence de Québec, succède au capitaine Georges-Edouard Gaudreau qui a pris sa retraite après avoir passé plus de 40 ans de sa vie dans les services maritimes du pays, dont 23 avec le ministère des Transports.

## Le Collège de la Garde côtière remporte un trophée convoité

Ottawa—Le Collège de la Garde côtière canadienne à Point Edward, N.-É., a remporté le trophée Howard Green pour le meilleur programme de prévention des incendies organisé en 1967 dans le groupe des installations gouvernementales renfermant plusieurs unités.

En remportant le prix, le collège a été jugé la meilleure des 102 inscriptions au concours de cette classe.

Le collège s'est également classé au deuxième rang dans le concours international de prévention des incendies, division des immeubles du gouvernement. On comptait ici 603 inscriptions du Canada et des États-Unis.

Dans le concours annuel de prévention des incendies des Services de l'Air, le collège a décroché le grand prix en déclassant 63 autres concurrents. De même, il a remporté le premier prix de la classe "A", où 15 concurrents étaient inscrits.

Le programme de prévention du collège, préparé par le chef George Tellum et son personnel, a mérité l'éloge du commissaire fédéral des incendies au ministère des Travaux publics ainsi que des juges internationaux attachés à l'Association nationale de prévention des incendies à Boston.

## Ottawa Rink Wins

*Milton, Ont.*—An Ottawa rink has won the R. W. Dodd Trophy, offered for competition by the chief of D.O.T.'s Air Traffic Control Division at the Second Annual ATC Bonspiel held here recently.

The Ottawa rink, one of 12 participating in the "spiel," was skipped by Don Bertrand. Other members were Bruce Bracken, Bob Weedmark and Graydon Marcellus.

An ATC reporter told *TRANSPORT* that the curlers were treated to a well-organized program of curling and social activities, organized by the Toronto ATC unit and added that special thanks should go to Messrs. Ralph, Corazzo and Taylor of Toronto for the work they put into organizing the event.

## Toward Better Management

*Ottawa*—A total of 121 departmental personnel have attended two seminars held so far this year as part of the Management Seminar Programme organized and directed by the training and development division.

This year both seminars were held at Mont Gabriel, Que. Last year, three of the seminars held took place at Banff, Alta., because of the large number of delegates from western Canada.

Objective of the seminars is to broaden the understanding of the D.O.T. management philosophy and system which is accomplished through discussion and exploration of the managerial functions which are part of the system.

Departmental officers with programme responsibility included G. A. Scott, assistant deputy minister, air; G. W. Stead, assistant deputy minister, marine; J. P. Connell, director general, personnel; G. C. Tilley, senior financial adviser; and H. Young, acting director, management services.

## Une administration améliorée

*Ottawa*—Au moins 121 employés du ministère ont pris part cette année à deux séances d'étude tenues jusqu'à maintenant dans le cadre du Programme de formation et de perfectionnement du personnel au niveau de l'administration.

Ces deux séances d'étude ont eu lieu à Mont-Gabriel, P.Q. L'an dernier, trois des séances ont eu lieu à Banff, en Alberta, pour mieux accommoder la plus large représentation de l'ouest du pays.

Ces études ont pour but d'approfondir la philosophie de l'administration et les méthodes de gestion au ministère et l'on y arrive par la discussion et les

recherches sur les diverses fonctions relevant de l'administration de nos services.

Parmi les hauts fonctionnaires chargés d'exposer certains aspects du programme se trouvent M. G. A. Scott, sous-ministre adjoint pour l'Air; M. G. W. Stead, sous-ministre adjoint pour la Marine; M. J. P. Connell, directeur général du personnel; M. G. C. Tilley, conseiller financier du ministère; et M. H. Young, directeur intérimaire des services de gestion.

## Suggestion Winners

*Ottawa*—Four Department of Transport employees have been awarded a total of \$175 recently for suggestions designed to improve operations and save money.

A \$70 award went to J. R. Fraser, a clerk at the Charlottetown Marine Services base, whose suggestion that a D.O.T. form be revised was found to represent an improved service to the public.

Awarded \$50 was Miss Florence L. Chamberlin, a stenographer at Edmonton, who suggested that a different type of carbon paper would last longer and save the department money.

Mrs. Eleanor Stevin, a clerk at Winnipeg, was awarded \$40 for suggesting

that suggestion award posters be produced in a smaller size to fit existing envelopes.

A \$15 award went to Fred Androschuk, a meteorological technician on Sable Island, for suggesting that a larger container be provided for the shipping of upper air meteorological records.

## Saint John Airport

*Ottawa*—Saint John Municipal Airport has been taken over by the Department of Transport, it was announced recently by Transport Minister Paul Hellyer.

The transfer involves approximately 2,000 acres of land, the two-storey air terminal building, airport maintenance and other airfield equipment and related buildings.

Members of the airport staff, other than meteorological, air traffic control and telecommunications personnel already employed by the Department of Transport became employees of the department with the change-over, said Airport Manager J. E. Maloney.

**Deadline for entries in the Department's Symbol Design Contest is Oct. 1, 1968.**

**La date-limite pour soumettre des inscriptions au concours pour le choix d'un nouveau symbole est le 1<sup>er</sup> octobre 1968.**

## Personne n'y échappe

*Ottawa*—La grève du transport en commun à Hull, en avril dernier, a causé des ennuis à bien du monde mais peut-être pas autant qu'à Jacques Fraser de la Division des règlements sur la radio. Jacques, pourtant, avait pris toutes les dispositions nécessaires pour s'assurer que rien—pas même une grève du transport—ne vienne nuire à son boulot quotidien.

Dès le premier jour de la grève, Jacques avait réussi à dénicher une âme charitable qui allait le conduire au travail tôt le matin et le ramener au foyer en fin d'après-midi. Pendant au moins deux jours, son système a fonctionné à merveille.

Puis, le troisième jour, son «chauffeur privé» étant en congé, Jacques décide de prendre sa propre voiture. En arrivant au bureau, il rencontre un confrère de Hull qui, à cause de la grève, s'est vu obliger de faire du pouce pour se rendre au travail. «J'ai ma voiture, aujourd'hui», dit Jacques. Attends-mois dans le parc de stationnement après 5 heures... Je te conduis chez toi.» Sur ce, les deux amis se laissent et Jacques se plonge dans son travail.

Plus tard au cours de la même journée, Jacques, qui a maintenant oublié les arrangements du matin, accepte de se faire lui-même conduire chez lui en fin d'après-midi par un autre compagnon de travail. «Quelle délicatesse», se dit-il... et il a peine à trouver les mots pour remercier convenablement celui qui fait preuve d'autant de gentillesse. Inutile de dire que Jacques se sent maintenant tout à fait soulagé. La grève du transport... il s'en moque.

On peut facilement s'imaginer tout de même la fin de l'histoire. En arrivant au foyer, il ne reçoit pas d'abord l'accueil habituel. «Jacques, dit sa femme, ta voiture?...» — «Ah non», dit-il... et Jacques doit donc revenir à Ottawa — «sur le pouce» cette fois — afin de cueillir sa voiture et son passager, si ce dernier a eu la patience d'attendre. Jacques nous dit qu'il a bien retrouvé son auto, quelques heures plus tard, mais que le passager n'y était plus. «Eh bien, dit-il en empruntant du poète italien Ariosto, l'homme propose et Dieu dispose.»



# Transport ALBUM des Transports



The Canadian Coast Guard Cutter *Moorhen*, a 38-foot search and rescue vessel based at the Department of Transport district marine agency at Victoria, heads out to sea on a routine patrol. The craft, which can develop 330 BHP, was built in 1952 for use on the west coast.

LENGTH: 38 feet  
BREADTH: 11.5 feet  
DRAFT: 4.6 feet  
POWER: 330 BHP  
GROSS TONNAGE: 13.02 tons

Le «*Moorhen*», cotre de recherches et de sauvetage de la Garde côtière canadienne, est attaché à l'agence de la marine du ministère des Transports à Victoria, Colombie-Britannique. Le navire a été construit en 1952 pour usage sur la côte du Pacifique.

LONGUEUR: 38 pieds  
LARGEUR: 11 pieds, 5 pouces  
TIRANT D'EAU: 4 pieds, 6 pouces  
PUISSANCE: 330 cvf  
JAUGE BRUTE: 13.02 tonneaux

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# CANADA



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**Rédacteur français** Édouard Deslauriers

ROGER DUHAMEL, F.R.S.C., QUEEN'S PRINTER AND  
CONTROLLER OF STATIONERY, OTTAWA, 1968

ROGER DUHAMEL, M.S.R.C., IMPRIMEUR DE LA REINE ET  
CONTRÔLEUR DE LA PAPETERIE, OTTAWA, 1968



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A sleek DC-8-63 stretch jet thunders off the runway in front of the brand new terminal at Vancouver International Airport. The massive building is designed to handle and park 30 aircraft at a time including jumbo jets and the supersonic airliners of the future.

(Photo by Ken Oakes, Vancouver Sun)

Un DC-8-63 à réaction, allongé et lui-même, quitte la piste de décollage dans un fracas de tonnerre en avant de la nouvelle aérogare de l'aéroport international de Vancouver. C'est un bâtiment massif capable de recevoir simultanément 30 aéronefs, y compris les futurs avions à réaction gros porteurs et aérobus supersoniques.

(Photo de Ken Oakes, Vancouver Sun)

## CLOSING THE GAP

Nearly 50,000 public servants in Ottawa last year contributed more than \$734,000 to the United Appeal. The volunteer agencies have not escaped the general inflation, however.

Each year Ottawa's agencies receive less than what they ask, despite the fact that each year campaign goals rise and public quotas are met.

In 1966, the agencies received \$200,000 less than their total requested budget; in 1967, the gap was \$300,000.

More than ever, the voluntary agencies need your financial and moral support if they are to continue to serve as the conscience of society and, in effect, close another gap.

Wherever there is a health or welfare need, the voluntary agencies of the United Appeal are on the job.

Won't you help them to help you?

## BOUCLER LA BOUCLE

Près de 50,000 fonctionnaires d'Ottawa ont, l'année dernière, contribué pour plus de \$734,000 à la Fédération des œuvres. Mais les agences bénévoles n'ont pas échappé à l'inflation générale.

Chaque année, les agences d'Ottawa reçoivent moins qu'elles ne demandent, en dépit du fait que, chaque année, la somme fixée pour la campagne est augmentée et que les quotas fixés pour le public sont atteints.

Voulez-vous les aider à vous aider?

En 1966, les agences ont reçu \$200,000 de moins que leurs besoins budgétaires totaux; en 1967, le déficit a été de \$300,000.

Plus que jamais, les agences bénévoles ont besoin de votre soutien financier et moral pour continuer leurs œuvres de bienfaisance et, en fait, boucler une autre boucle.

Chaque fois qu'il y a un besoin de soins ou de bien-être, les agences bénévoles de la Fédération des œuvres répondent à l'appel.



# organizational changes what they mean to d.o.t.

Staff will be interested in changes in governmental organization recently announced by the government. The principal transfer affecting Transport will take place in telecommunications.

The Department of Transport has had two major responsibilities in telecommunications and electronics, represented by two telecommunications branches. One provides electronic aids to navigation and communications in support of transportation; examples include instrument landing systems at airports, radar for air and marine traffic control, and communications for aviation and marine purposes. This activity concerned directly with matters of transportation and operating as an integral part of aviation and marine transportation systems will remain in Transport except for one or two minor adjustments. Its name, however, may be changed.

The other branch, the Telecommunications Policy Bureau, was set up to deal with the allocation of frequencies in the radio spectrum and the issuance of technical radio licences under the Radio Act; and to advise on the growing problems of domestic and international communications service to the public.

It will be transferred to the new Department of Communications when that department is established by statute and meanwhile reports to the minister-designate of that department.

The field staff of the Policy Bureau, who are employees of the Radio Regulations Branch, are at present integrated with the various Air Services' regional headquarters across the country, thus receiving administrative support in matters of office space, office services, accounting, financial control and support, and personnel assistance.

It has not yet been determined whether at field staff level the various support services mentioned will be established independently by the new department or whether the Radio Regulations field staff will continue to receive support in the form they do at present from the existing Air Services' regional staff.

Until these matters have been sorted out, the Department of Transport will continue to give the branch the full support at both headquarters and field staff level that has been given hitherto in these various specialized supporting administrative services.

Another change relates to shipbuilding. Decision has been taken to bring together ship procurement activities in the new Department of Supply and Services when it is created—a department that will replace the present Department of Defence Production. In this area certain related problems for the Canadian Coast Guard are still under study and I will report further on this in a later issue.

Meanwhile, to the Telecommunications Policy Bureau and staff who will be going to the new Department of Communications, I extend thanks for loyal and helpful service in the Department of Transport and best wishes for the future.

*J. R. Baldwin*  
Deputy Minister





# certains services détachés des transports

Le personnel du Ministère s'intéresse aux changements dans l'organisation gouvernementale qui ont été annoncés récemment. Le changement principal qui touche au ministère des Transports est celui qui porte sur les télécommunications.

Deux secteurs du domaine des télécommunications et de l'électronique relevaient jusqu'à maintenant du ministère des Transports, chaque secteur étant représenté par une direction. L'une de ces directions fournit les aides électroniques à la navigation et les services de communications nécessaires au transport. Des exemples de ce secteur d'activité comprennent les systèmes d'atterrissage aux instruments aux aéroports, le radar pour le contrôle de la circulation aérienne et maritime, et les communications pour l'aviation et la marine. Ce secteur d'activité, qui a directement trait aux transports et qui forme une partie intégrante des systèmes de transport aérien et maritime, demeurera au sein du ministère des Transports, à l'exception d'un ou deux ajustements de moindre importance. Le nom de ce secteur d'activité pourra, toutefois, être modifié.

La seconde direction, soit le Bureau des télécommunications (Administration et ligne de conduite), a été établie pour attribuer des fréquences du spectre radioélectrique, délivrer des licences techniques de radio en vertu de la Loi sur la radio, et donner des conseils sur les problèmes grandissants des services nationaux et internationaux de communications offerts au public.

Cette direction sera transférée au nouveau ministère des Communications lorsque ce dernier sera institué par une loi et, entre-temps, elle devra répondre au ministre désigné de ce ministère.

Le personnel régional du Bureau des Télécommunications qui fait partie de la Division des règlements sur la radio est actuellement intégré aux différents bureaux régionaux des Services de l'Air à travers le pays, et jouit ainsi du soutien administratif en ce qui a trait à l'espace et aux services de bureau, à la comptabilité, au contrôle et au soutien financiers, et au personnel.

Il n'a pas encore été décidé si, au niveau du personnel régional, les différents services de soutien mentionnés seront établis indépendamment par le nouveau ministère ou si le personnel régional de la Division des règlements sur la radio continuera à recevoir le soutien qui lui est fourni actuellement par le personnel régional existant des Services de l'Air.

Jusqu'à ce qu'une décision soit prise au sujet de ces questions, le ministère des Transports continuera à fournir à cette direction, tant au niveau du personnel de l'Administration centrale qu'au niveau du personnel régional, tout le soutien qui lui a été fourni jusqu'à présent dans les différents domaines des services administratifs spécialisés.

Une autre modification se rapporte à la construction de navires. Il a été décidé de rattacher le secteur d'activité relatif à l'acquisition de navires au nouveau ministère des Approvisionnements et des Services lorsqu'il sera créé, ministère qui remplacera le ministère actuel de la Production de la défense. Dans ce domaine, certaines questions afférentes à la Garde côtière canadienne sont encore à l'étude et je vous en parlerai de nouveau dans un prochain numéro.

Entre-temps, je remercie le Bureau des télécommunications (Administration et ligne de conduite) et son personnel qui seront rattachés au nouveau ministère des Communications pour les services utiles et loyaux qu'ils ont rendus au ministère des Transports et je leur exprime mes meilleurs souhaits pour l'avenir.

*J. R. Baldwin*  
Sous-ministre

# SYSTEMS PLANNING

## d.o.t.'s answer to the air industry's needs

by D. R. Hemming, Director,  
Planning and Research Branch,  
Air Services.

The aviation industry has been exploding at an unprecedented rate and it is an explosion that has rightly been termed a revolution.

J. C. Gilmer, president of Canadian Pacific Airlines, in a recent speech to the Edmonton Chamber of Commerce, states:

"In 1967, some 230,000,000 people travelled on the airlines of the free world. Indications are that this total will jump to over 350,000,000 a year by 1970, to 500,000,000 by 1975, and to more than 700,000,000 by 1980. It is estimated that by the end of this century, the flow of air travellers may well reach one billion a year."

Major changes are occurring in the habits of work and play of the inhabitants of the North American continent.

Leisure activities are increasing. There is a new mobility developing which will render present aviation facilities obsolete.

By 1985, the international airports at Montreal and Toronto will be experiencing activities comparable to John F. Kennedy Airport in New York today.

New types of aircraft either in service or being designed include:

1) Stretched versions of the British Aircraft Corporation's VC-10 carrying 174 passengers. Stretched version of Douglas DC-8 transport carrying 250 passengers. (These aircraft are now in service.)

2) Boeing 747 carrying up to 490 passengers (In service by 1970). Super Jet Transport Lockheed L-500, 800-passenger version is planned.

3) Advanced technology tri-jets, Lockheed 1011 and Douglas DC-10, 285 to 300-passenger capacity expected in service in 1972.

4) Supersonic transports. The Anglo-French Concorde carrying 136 passengers is expected to be in service in 1972. The Boeing SST will carry 350 passengers and is expected to be in service in 1976.

The supersonic transports with their 2,000 m.p.h. speed and the huge super jet transport with passenger capacity dwarfing those of current jetliners, will introduce different ground problems. The speed of the SST will make long ground times increasingly intolerable to the travelling public. The passenger loads of the larger planes will generate peak period delays, confusion and congestion at major airports, unless proper planning is undertaken.

### The Systems Solution

Air travel is once again entering a new era. The Boeing 747, the SST and the all-cargo C-5A are major advances in aviation technology. Similar progress must occur in planning and administration to meet this challenge. It is entirely wasteful to plan "piecemeal" from now on.



D. R. Hemming

Mr. Hemming has headed aviation planning and research since 1965.

A native of Dartmouth, N.S., he served with the Royal Canadian Air Force during the Second World War where, as a coastal command pilot, he flew on anti-submarine patrols.

In 1945, he enrolled at the University of New Brunswick, graduating four years later with a Bachelor of Science degree.

From 1949 to 1951, he served in a research capacity with the Department of Resources and Development in Ottawa.

He then re-enlisted in the RCAF as a construction engineer officer and pilot and subsequently spent four years in Germany.

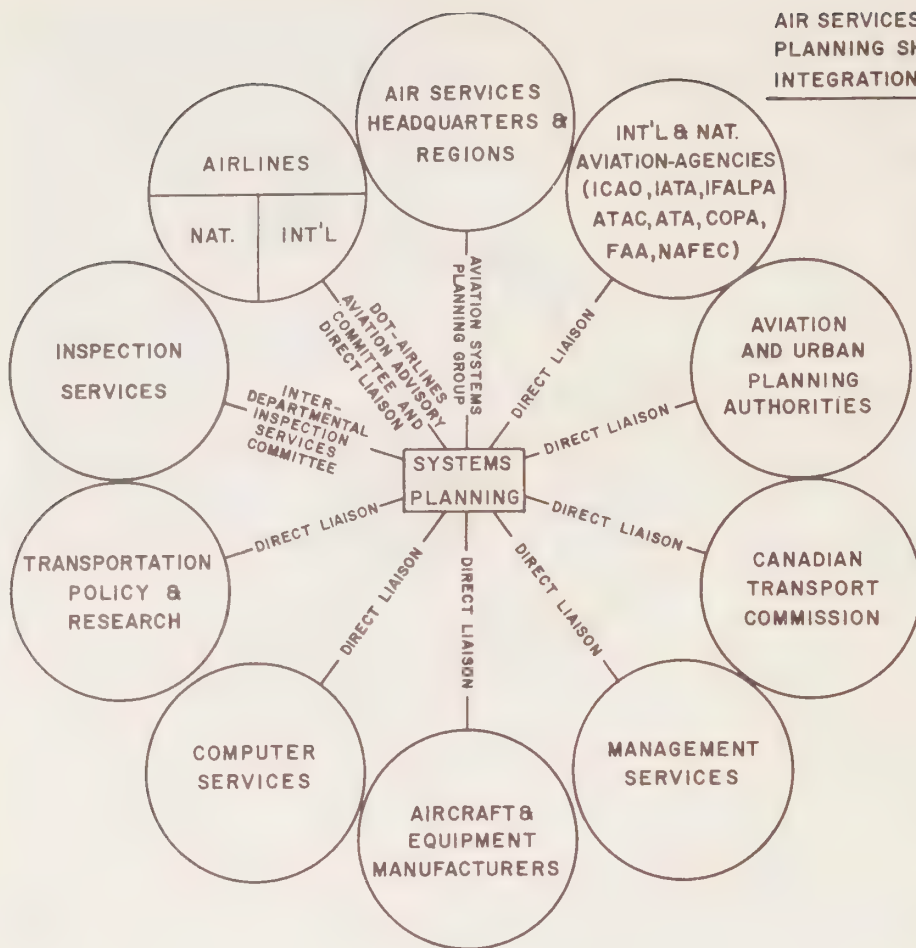
Before leaving the RCAF in 1961, he was a project engineer concerned with the construction of Canadian Bomarc missile bases.

Mr. Hemming joined D.O.T. as an operational research officer in 1961 and was appointed superintendent of the master plans section in January, 1965.

This article is taken from a paper delivered by Mr. Hemming at a recent meeting of the Canadian Transportation Research Forum.



**AIR SERVICES SYSTEMS  
PLANNING SHOWING HOW  
INTEGRATION EFFECTED**



A total systems approach to air transportation planning offers one promising solution. The planners in the Department of Transport have evolved systems planning techniques which are assisting in the development of facilities and procedures which will allow the new aviation technology to achieve its full potential in Canada.

Efforts are made to correlate the overall air transportation system with the planning being done for other forms of public transport in the total transportation network.

Aviation Systems Planning involves the integration of all the component parts and operating elements that make up the total air transportation system. It entails the application of scientific methods to the planning of these systems on an integrated and balanced basis. The concept of systems planning is not new and while the formula is simple, its application to aviation has been complex.

There is a myriad of agencies and organizations involved in the overall air transportation system: airlines, government inspection services, aviation and urban planning authorities, aircraft and equipment manufacturers, international and national aviation agencies.

Systems planning endeavours to have these organizations plan together as a group more effectively by providing the necessary catalyst which enables those groups to communicate and collaborate in joint planning ventures to the benefit of all participating organizations. Each group has a self interest, which is considered in final decision-making, yet efforts are guided towards agreed upon common objectives.

Systems planning in Air Services is carried out by "multi-disciplined" teams. The disciplines considered the minimum to effectively carry out systems planning on the scale required in Canada are: aviation specialist, architect, operations research analyst, civil engineer, traffic engineer, economist, telecommunications engineer, meteorologist.

These and other disciplines interact to form the most powerful analytical tool yet achieved for the solution of aviation planning problems.

This multi-disciplined planning team uses all the research tools available to management today. The problems are reduced to numbers as much as possible, with some of the arithmetic being done on computers.

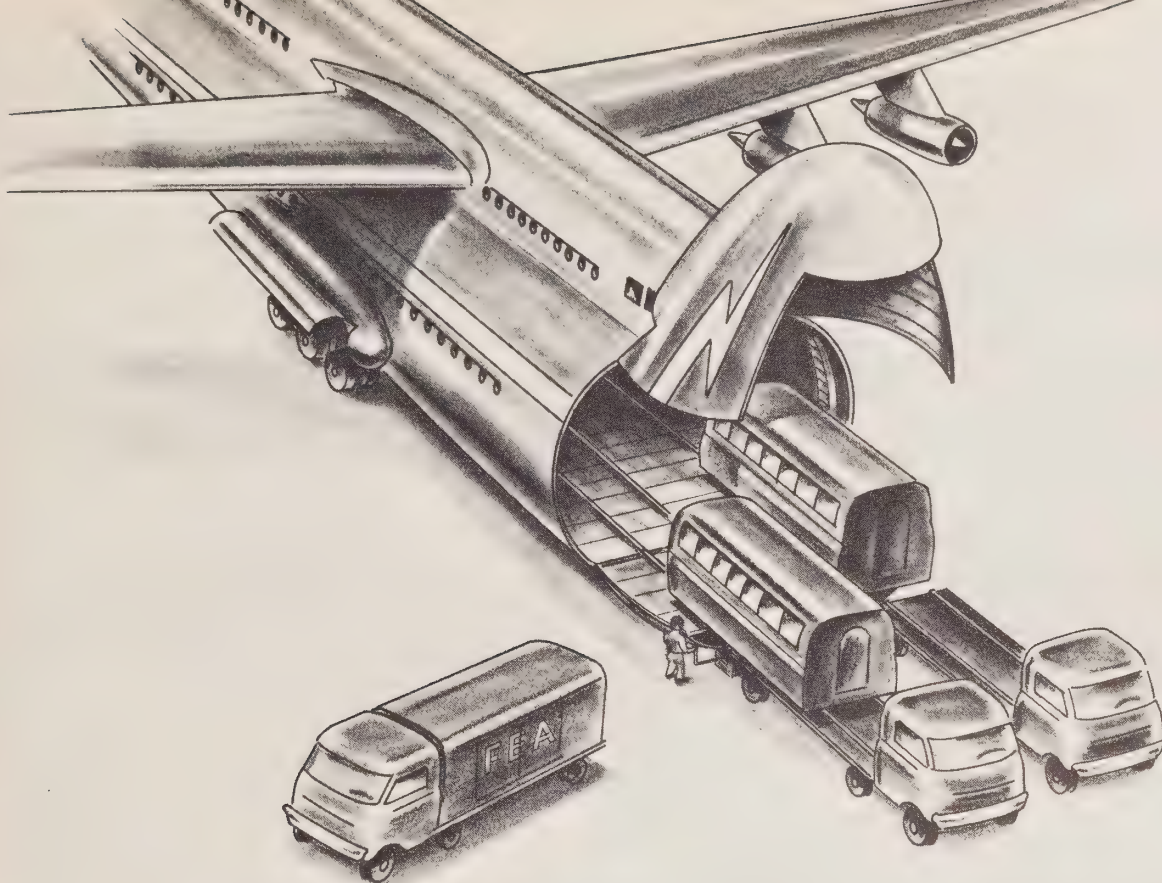
There has been a shift in emphasis in planning from total reliance on judgement and experience to an increase reliance on searching and scientific analysis of alternatives.

This does not mean complete abandonment of judgement and experience. Rather, it means the sharpening of judgement. A problem often becomes clearer if the factors which lend themselves to quantitative analysis are analysed before the most intangible factors are studied. The basis for a major decision or plan is, therefore, scientifically developed.

The air transportation system is considered to be constructed of a series of sub-systems; enroute airspace, terminal area airspace, airport and ground access.

It is our objective to optimize all the sub-systems into one efficient air transportation system. To accomplish this objective, we must determine such things as:

- 1) The capacity of the airspace surrounding large transportation hubs.
- 2) The optimum location for airports.
- 3) When an airport should be built.
- 4) To what degree present airports should be expanded and for what type of aircraft.



One of the most important subsystems is the airport. At the present time, the Department of Transport is developing 20-year master plan reports for its airports. This is a research document covering the following factors:

A. Air Systems: consisting of terminal airspace and approach aids, air traffic control facilities and aircraft manoeuvring areas.

B. Ground Systems: consisting of the passenger terminal complex, air cargo area, general aviation area, airport operations and maintenance areas, commercial areas, airport road systems, and other transportation links.

For balanced airport planning, each factor must be analysed to be sure that its capacity matches that of the others and that the capacity of all will satisfy the demand.

Systems planning, to be effective, must be based on the best possible forecasts that can be obtained. The day when our only guide to the future was speculation by informed individuals has passed.

Modern attempts to discover objective and scientific ways of planning for the future replaces accidental discovery with comprehensive analysis. Therefore, the master plan reports also cover the following:

1) Forecasts, both socio-economic and operational for the area and airport concerned, which indicate the anticipated air transportation demand during the forecast period.

2) Evaluation of existing site suitability to meet forecast requirements for the area.

3) Analysis of both air and ground systems to forecast existing and potential constraints.

4) Suggested phased development concepts necessary to meet the forecast requirements.

We know that forecasts are not infallible and that technology, especially aviation technology, can change at a rapid pace. Since the phased development specified in the master plan is predicated on social, economic and technological forecasts which are subject to change, a periodic systems analysis is required to determine whether actual activity is following forecast trends.

If activity is not following forecasts, development timing can be changed accordingly. The primary purpose of this analysis is to provide management with factual information as to current levels of activity for each system at a site and to identify existing or potential constraints.

Many variables on the airport can be analysed and optimized. The airport master plan must recognize the objectives and requirements of the airlines, passengers and shippers, airport operators, municipalities, airport community and regulatory agencies. It must satisfy the various interests with regard to such key items as operating costs, amortization costs, capital costs, location, size, appearance and technical requirements.

### Conclusion

The systems approach provides the administrative focal point and the necessary catalyst to accomplish cohesive air transportation planning. It also provides management with a better framework for procedural decisions and for policy organization.

Although with the systems approach there is an increased reliance on searching scientific analysis of alternatives, the actual value of systems planning still depends to a large extent on the judgement and experience of those who select, analyse and develop the data.

The business of air transportation is too dynamic for a planning procedure to remain the same for very long, so changes are constantly being made to our systems approach as a result of improved knowledge and techniques.



# coast guard days draw large crowds

Premier Alexander B. Campbell of Prince Edward Island took his two young children for a row in a dory last June 28.

He didn't have to row hard, however, as the boat was drawn on wheels as part of the opening ceremonies of the Department of Transport's \$3,000,000 marine buildings and wharf at Charlottetown.

The base also held a Canadian Coast Guard Day June 29, at which the public was invited to see exhibits and demonstrations to show the Coast Guard's role in support of shipping in Canadian waters.

Ceremonies elsewhere across the country included a combined official opening of new facilities and Coast Guard Day at Hay River, N.W.T., July 22, and Coast Guard Days at Sorel, Quebec and St. John's, Nfld., on July 7 and 27 respectively.

In the presence of His Honor the Lieutenant Governor and distinguished guests, Premier Campbell "rowed" the dory across to a display light which had shone many years from the lighthouse at

Cape George, Quebec, before it was displaced recently by an automatic light. The premier climbed inside and switched on the light which has continued to shine since.

Guests were then invited to tour the facilities, which had been specially prepared with exhibits for the next day's Coast Guard Day observance.

In addition to display photographs and models, the various sections of the work area contained working models of the buoys, towers and other equipment built or maintained at the base.

The wharf area was laid out to resemble a navigation channel, with the appropriate buoys and other aids set up to "guide" the visitors.

Guests also toured CCGS *Tupper*, a star attraction during its visit to Expo 67 last year and later attended a reception aboard CCGS *Edward Cornwallis* where Captain Paul Tooke was host.

Ian Leslie, district manager of the Charlottetown base, organized the event and acted as master of ceremonies.

Events the next day were well attended, with some 2,200 passing through CCGS *Tupper* alone.

In addition to the two icebreakers, the display featured the search and rescue craft *Rapid*, a Sikorsky S-62 helicopter and a smaller Bell helicopter which operates from a heliport on the *Tupper*.

## St. John's

Three Coast Guard ships and two helicopters highlighted the first Coast Guard Day ever held in St. John's, Nfld.

"I think it was a very worthwhile effort," said R. E. Stone, district manager of the marine services base, who noted that more than 1,000 visitors turned out for the event despite unfavorable weather.

On display were the Canadian Coast Guard Ships *Montmorency*, *Wolfe*, *Seabeacon*, and two Coast Guard helicopters.

## Hay River

The symbolic opening of facilities at Hay River, N.W.T., July 22 also involved lights.

When District Marine Agent James Rose cut a ribbon, he activated two buoy lights on either side of the door to the new building.

Displays of work, films and photographs so intrigued residents and visitors that they were back the following day for another look.

As a concession to popular demand, the agency not only opened its exhibits but staged an impromptu "lifeboat ditch and recovery" race between the crews of CCGS *Eckaloo* and CCGS *Dumit*, two of the shallow-draft vessels which maintain navigation aids in the Mackenzie River system. The crews launched lifeboats over the side and raced about a mile downriver and return.

## Sorel

More than 2,500 visitors were attracted to Sorel's Coast Guard Day last July 7 where exhibits included the Canadian Coast Guard ships *C.D. Howe*, *Tracy*, *Verendrye* and *Montmagny*.





**IL Y AVAIT FOULE À SOREL**—On estime à plus de 2,500 le nombre de personnes qui ont visité l'Agence de la marine, à Sorel, la «Journée de la garde côtière» le dimanche 7 juillet dernier. On voit ici une partie de la foule se pressant autour des pièces d'équipement mises en montre dans une vaste salle d'étalage aménagée pour l'occasion.

**QUITE A CROWD**—More than 2,500 people visited the Sorel Marine Agency on Coast Guard Day last July 7. Photo shows part of the crowd looking over the massive displays set up for the occasion. Canadian Coast Guard Ships on display included the C.D. Howe, the Tracy, the Montmagny and Vérendrye.

## un succès éclatant à Sorel

La «Journée de la Garde côtière» à Sorel, le 7 juillet dernier, premier événement du genre tenu dans cette municipalité, a été couronnée d'un succès éclatant. Des milliers de personnes venant de Sorel et des diverses municipalités avoisinantes ont parcouru en foule les terrains de l'Agence de la marine du ministère des Transports pendant tout l'après-midi.

On estime en effet à 2,570 le nombre de visiteurs qui ont été accueillis à bord des navires qui s'y trouvaient et qui ont eu l'occasion de voir les divers étalages mettant en vedette les plus récentes acquisitions dans le domaine des aides à la navigation. On avait même en montre d'anciennes lanternes et bouées utilisées au tout début de la navigation au pays.

Tout le personnel de l'Agence était sur les lieux pour accueillir les visiteurs et fournir des explications sur les services de la Garde côtière. Le capitaine Howard Bould, de Trenton, officier de recherches et de sauvetage pour la région des Grands lacs, était également du groupe

pour répondre aux questions touchant ce service spécialisé de la Garde côtière.

Quatre navires accostés au quai de l'Agence étaient ouverts aux visiteurs. Deux d'entre eux, soit le *C.D. Howe*, navire spécial du service de l'Arctique, et le *Tracy*, nouveau brise-glace-baliseur entré en service cette année, ont semblé susciter le plus d'intérêt. La circulation à bord a été très dense pendant toute la durée des heures de visite. Les deux autres navires de l'Agence sont le *Montmagny* et le *Vérendrye*.

Le *C.D. Howe*, prêté par l'Agence de Québec pour l'occasion, a filé vers l'Arctique peu après son séjour à Sorel. C'est un navire spécialement équipé pour effectuer des sondages sur le plan médical et pour prodiguer des soins médicaux et dentaires à la population du Nord.

Les organisateurs de cette première «Journée de la Garde côtière» à Sorel se réjouissent des succès remportés et sont particulièrement heureux d'avoir eu cette occasion de mieux faire connaître les services que l'Agence destine à la population de Sorel et des environs.



# ...et maintenant le «TERRAPLANE»

Le TERRAPLANE, nouveau type de véhicule à coussin d'air a été soumis à des essais techniques pour le compte du ministère fédéral des Transports à l'établissement d'essai du génie (terre) du ministère de la Défense nationale, à Orléans, à une dizaine de milles à l'est d'Ottawa.

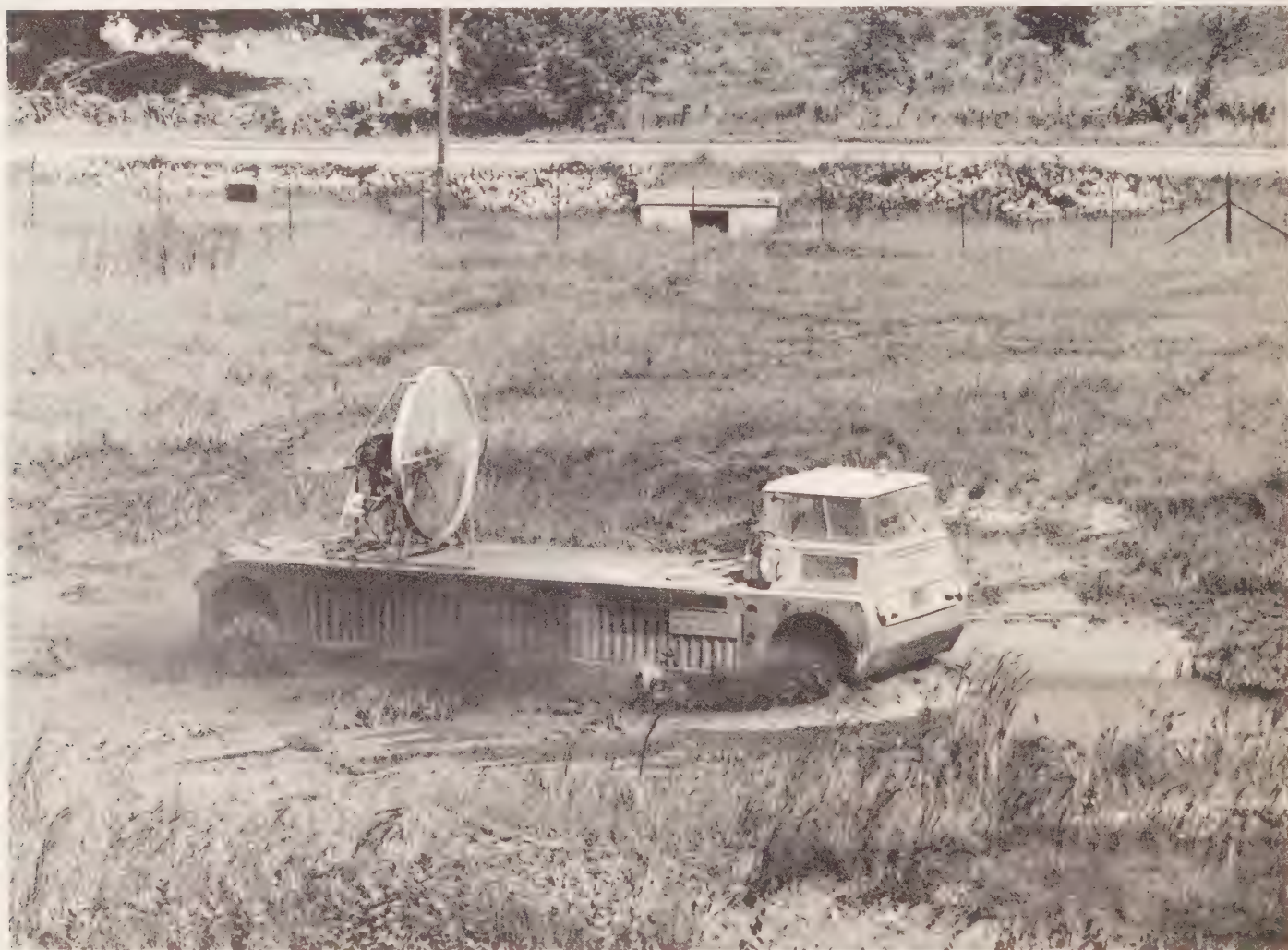
Le véhicule ressemble à un énorme camion; il repose sur des roues mais il est muni de coussins d'air et possède

certaines qualités propres aux véhicules amphibies. Conçu et construit par la société française BERTIN & CIE, le TERRAPLANE BC 7 qui a été soumis aux essais a été obtenu par l'entremise de la Hoverwork Canada Limited, agent de BERTIN au Canada.

Le TERRAPLANE est essentiellement un véhicule terrestre. Il est construit pour être utilisé sur des chemins rudimentaires ou sur des pistes tracées au

bulldozer, en toutes saisons ou dans toutes les conditions météorologiques.

Il peut franchir les rivières et traverser les marais aussi bien qu'il peut évoluer sur le sable, la boue, la glace et la neige. On estime qu'en palier il peut atteindre une vitesse de 50 milles à l'heure. Sur une piste parsemée d'obstacles, il peut atteindre une vitesse maximum de 30 milles à l'heure, tandis que sur l'eau il se déplace à une vitesse maximum de 6 milles à l'heure.





# the "TERRAPLANE" adds a twist to air cushioned transport

A new type of air cushion vehicle, the "Terraplane," has undergone three weeks of engineering tests at Orleans, about 10 miles east of Ottawa.

The tests were conducted for the Department of Transport at the Land Engineering Trials Establishment of the Department of National Defence.

Resembling a huge truck, the vehicle rests on wheels but is equipped with air cushions that give it certain amphibious qualities.

Designed and built by the French firm of "Bertin & Cie," the Terraplane BC.7 was obtained for the tests through the company's Canadian agent, Hoverwork Canada Limited.

Essentially a land vehicle, the Terraplane is designed for use over crudely-cleared or bulldozed tracks of land in all seasons or weather conditions.

It can ford rivers, cross marshes and manoeuvre on sand, mud, ice and snow.

On level ground, the vehicle is capable of speeds up to 50 miles an hour. Its speed over roughly cleared track with obstacles is roughly 30 miles per hour, while on water it has a maximum speed of six miles per hour.



# WE'RE POPULAR

There's a new tourist attraction in Ottawa that's proving to be almost as popular as the Parliament Buildings.

It's the Department of Transport Hangar at Ottawa International Airport, which has counted more than 1,500 visitors in the first five months of the year.

"We started off showing the place to a few visitors who expressed interest in seeing the headquarters of our Flight Services Division," said Bill MacKenzie, chief mechanic at the hangar. "How we got so popular so fast I'll never know."

"We don't mind having visitors but we don't encourage them as we just don't have the time when we get busy around here," he said.

The visitors, who range from school-children to U.S. tourists to groups of senior citizens, are usually taken on a tour of the hangar by Mr. MacKenzie, M. E. Louch, chief of the division, or Stan Attwell, foreman cleaner at the hangar.

Biggest attraction of the hangar is the V.I.P. aircraft where the children want to know immediately "where the prime minister sits."





# NOMBREUX VISITEURS



Le hangar du ministère des Transports à l'aéroport international d'Ottawa est en train de devenir une des grandes attractions touristiques de la capitale nationale. Seulement au cours des cinq premiers mois de cette année, on a compté plus de 1,500 visiteurs.

«Le tout a commencé lorsqu'on a ouvert les portes à quelques dignitaires intéressés à voir nos installations au chef-lieu de la division des vols, souligne M. Bill MacKenzie, mécanicien en chef au hangar. Mais, comment on est devenu si populaire par la suite demeure un mystère», dit-il.

«Les visiteurs sont évidemment bienvenus, continue M. MacKenzie, mais il nous arrive bien souvent de ne pouvoir les accueillir convenablement à cause du surcroît de travail au hangar.»

Les visiteurs, comprenant un grand nombre de touristes et surtout des écoliers, sont habituellement guidés dans leur tournée du hangar par M. MacKenzie, par M. M. E. Louch, chef de la division, ou par le contremaître chargé de l'entretien, M. Stan Attwell.

*Left: Stan Attwell, foreman cleaner at the D.O.T. Hangar, Ottawa International Airport, stops at the top of a boarding ramp to give a class of visiting school-children a few pointers on a four-engined Viscount before letting them look the craft over firsthand.*

*Top Center: Their impressions of a tour through the Viscount mirrored on their faces, the children's collective reaction was, naturally, "What's next?"*

*Bottom center: Two youthful members break away from the group for a first-hand look at overhaul operations in the hangar's helicopter section.*

*Lower right: Their tour complete, there's time for a few quick questions while the teacher (right) counts heads.*

*A gauche: Le contremaître à l'entretien du hangar, M. Stan A. vell, accueille un groupe d'écoliers à l'entrée d'un aéronef. Après un bref exposé sur le fonctionnement de l'appareil, M. Attwell dirigera les jeunes à l'intérieur du quadrimoteur Viscount.*

*Centre haut: Visiblement impressionnés par ce qu'ils ont vu, les jeunes ont maintenant hâte de passer à la section du hangar où se trouvent les hélicoptères.*

*Centre bas: Deux jeunes se détachent du groupe pour aller consulter un mécanicien à l'œuvre.*

*A droite, ci-dessous: La tournée étant complétée, l'institutrice rassemble les jeunes pour la période de questions.*





# winners among weathermen

ALBERTA HAIL STUDIES  
PROJECT AREA

TYPICAL SITUATION  
FAVOURABLE FOR HAILSTORMS  
IN ALBERTA

FARMERS HAIL REPORTS

MAJOR STORM TRACKS 66



## Professor Balfour Awarded Patterson Medal for 1967

Winner of the Patterson Medal for 1967 is Professor Balfour W. Currie, Dean of the Graduate School, University of Saskatchewan, Saskatoon. The picture shows Professor Balfour, right, receiving the award from D. H. Smith, DOT Regional Meteorologist, Edmonton, at the second annual meeting of the Canadian Meteorological Society in Calgary this summer.

The Patterson Medal, struck by the Royal Canadian Mint, features a likeness of Dr. John Patterson, controller of the Meteorological Service of Canada from 1929 to 1946, and is awarded annually to a resident of Canada who, in the opinion of the award committee, has rendered distinguished service to meteorology, either over a protracted period of time or through recent outstanding achievement.

The award committee consists of five members: three from the Meteorological Branch, one from a Canadian university, and one from a scientific or industrial organization.

In making the presentation Mr. Smith paid tribute to Professor Currie as a scientist of international reputation who had made significant contributions in the field of atmospheric physics and had inspired others to pursue a career in meteorology. He referred particularly to Professor Currie's distinguished work on the application of meteorological knowledge to agricultural problems in the Canadian Prairies.

Professor Currie is a Fellow of the Royal Meteorological Society, a member of the American Meteorological Society, a member of the Canadian Meteorological Society and a Fellow of the Royal Society of Canada.

## Volunteer Observers Honored by Met.

A total of 65 Department of Transport awards have been presented to the captains and officers of 44 merchant and government ships for voluntarily making weather observations during 1967.

In announcing these awards, J. R. H. Noble, director of the Met. Branch, said that most of the information on weather conditions over the oceans of the world is provided by about 4,000 merchant ships of some 35 different nations.

Canada has enlisted the aid of about 160 ships whose officers observe the weather at fixed hours during each day and send a coded report by radio to the nearest coastal receiving station in any port in the world.

From the thousands of ships' weather reports received every day, the meteorologist is able to draw his weather maps over the immense ocean areas which cover 70 per cent of the earth's surface.

These maps form the basis of marine weather forecasts and warnings which are broadcast to ships at sea all over the world several times a day, within hours after the ships' officers have made the observations on which the forecasts are based.

Since weather reporting at sea has always been a voluntary undertaking on the part of the ships' officers by tradition, the department's annual book awards are a small tangible token of its appreciation for fine work done on its behalf.

Among Canadian Coast Guard ships and officers receiving awards were:

Captain M. C. Lever of C.C.G.S. *Narwhal*, was presented with a copy of the book "The Ship—An Illustrated History" by Bjorn Landstrom.

Desmond Daly of St. John's, Nfld., a deck officer on CCGS *Sir Humphrey Gilbert*, received a copy of the National Geographic Atlas of the World.

E. R. Bonneau, of Ville de Laval, Que., a radio operator aboard CCGS *d'Iberville*, was awarded a copy of "Gipsy Moth Circles the World" by Sir Francis Chichester.

N. T. Kristensen of New Denmark, N.B., a radio officer aboard CCGS *John A. Macdonald*, also received a copy of Sir Francis' book.

# transport people

## *a proud moment*

It was a proud moment recently for Carole Evans, 17, who qualified for her licence as one of the youngest pilots in Canada. Even happier, however, was D.O.T. Airways Inspector N. S. (Norm) Evans, Carole's father, who had the pleasure of presenting it to her. Also on hand for the occasion was Instructor Jacques Lauzon of the Ottawa Flying Club.

## *papa est heureux et fier*

La jolie Carole Evans, âgée de 17 ans, vient de décrocher sa licence de pilote et devient, de ce fait, une des plus jeunes aviatrices au Canada. C'est son père, à gauche, M. N. S. (Norm) Evans, de la Division des normes et règlements de vol du ministère des Transports, qui a le plaisir de présenter le certificat à sa fille. La présentation a eu lieu en présence de l'instructeur Jacques Lauzon de l'Ottawa Flying Club.



## *new director*

Herbert O. Buchanan, 46, of Ottawa, has taken over his appointment as regional director of marine services for the Western Region. Mr. Buchanan, former chairman of the D.O.T.'s Board of Steamship Inspection, will be based in Vancouver. The region for which he will be responsible includes the three western provinces and that part of the Northwest and Yukon territories lying west of a line drawn from the northern end of the Saskatchewan-Manitoba boundary to the Boothia peninsula.

## *nouveau directeur*

M. Herbert O. Buchanan, âgé de 46 ans, d'Ottawa, vient d'assumer ses nouvelles fonctions comme directeur des Services de la marine pour la région de l'Ouest. M. Buchanan, ci-devant président du Bureau d'inspection des navires à vapeur, occupe ses nouveaux bureaux à Vancouver.







**HÉLICOPTÈRE À L'ŒUVRE À OTTAWA—**  
Ce "Jet Ranger" de la Garde côtière canadienne est sur le point d'atterrir à quelques pas du hangar du ministère des Transports à l'aéroport international d'Ottawa. L'appareil est piloté par "Stu" Fraser du ministère.

**CHOPPER HOPPER AT WORK—D.O.T.**  
*Helicopter Pilot "Stu" Fraser puts a Canadian Coast Guard "Jet Ranger" helicopter through its paces at the department's base at Ottawa International Airport.*



**LE N.G.C.C. «J. E. BERNIER» À QUÉBEC—**  
Le brise-glace-baliseur «J. E. Bernier», une des plus récentes acquisitions de la Garde côtière canadienne, est photographié ici peu après avoir quitté son port d'attache à l'agence de la marine du ministère, à Québec. L'équipage à bord se compose de 59 personnes. Le navire est commandé par le capitaine Elphège Pelletier.

**CCGS «J. E. BERNIER» AT QUEBEC—**  
*The new icebreaking supply and buoy tender, "J. E. Bernier", one of the Canadian Coast Guard's newest vessels, is seen leaving her base at the Quebec District Marine Agency. Commanded by Capt. Elphège Pelletier, she has a crew of 59.*

## "TRANSPORT" à l'honneur

«Transport» vient de remporter un prix. Notre revue s'est classée parmi les cinq meilleures publications de son genre inscrites au dernier concours annuel de l'Association canadienne des rédacteurs de publications d'entreprise.

La revue a été citée pour l'excellence de son contenu et de sa présentation. Une remarque élogieuse des juges avait précisément trait au choix judicieux d'articles rédigés dans les deux langues. On a dit à ce sujet que «le mélange de l'anglais et du français est accompli avec goût et dignité».

Une centaine de publications provenant des services du gouvernement et de l'industrie avaient été inscrites au concours. Les gagnants ont été proclamés au cours d'un congrès de l'Association à Winnipeg. On a alors présenté un certificat de mérite au rédacteur de la revue «Transport», M. Bryan Goodyer.

## "THE DOT" wins award

We've won an award!

"The DOT" (its name was changed to TRANSPORT last January), has been cited "in recognition of outstanding performance" during 1967.

The award, a certificate of merit, was presented to the magazine as one of the top five entries in the magazine category of the 1968 Annual Awards Program of the Canadian Industrial Editors Association.

TRANSPORT is a member publication of the CIEA.

The award was presented to TRANSPORT editor Bryan Goodyer at the CIEA's National Communications Conference, held in Winnipeg.

More than 100 publications from government and industry were entered in the various categories of the competition.



# COAST GUARD 101

A trim and speedy craft known as Coast Guard 101 has earned the respect and admiration of seagoing men in the Clarks Harbour area of Nova Scotia.

Her crew are most proud, however, of one fact—they have never had to turn back from a mission at sea because of the weather.

Alvin Nickerson, assistant coxswain of the vessel said she has been out in winds as high as 70 miles an hour with the accompanying sea, and goes in any weather.

Fishermen in this Cape Sable Island port all have high praise for the ship they know as "the 101".

The majority feel there is a need for more such craft stationed along the Nova Scotia coast to perform a similar function as the 101.

The majority of the 204 missions of 101 have been towing jobs of fishing vessels which have broken down or who have wrapped nets or other gear in propellers. These occur sometimes in groups, sometimes spread out to only one or two a week and there have been several occasions where 101 has gone to the assistance of one ship, only to bring back two.

There have also been some emergency calls such as the time two men were in a small fishing boat and drifting seaward from Seal Island in a sinking condition.

Mr. Nickerson said that the weather was such that a normal fishing boat probably wouldn't have been able to rescue the ship and the men could have drifted out to sea and been lost.

Another time the 101 took a doctor to a trawler at sea which had an injured crew-man, but the weather was too rough to effect a transfer of the doctor.

This was the time the wind reached 70 miles an hour and the trawler was located on Brown's Bank, many miles to sea.

The 101 has even searched for flying saucers, during the time last fall when an unidentified lighted object was seen going down in the sea off Shag Harbor by several persons.

The 101 spent nearly two days in the area in the search as RCMP thought for a time it might be an aircraft. The log entry for the October 4 date is searched for aircraft or ? object.

Other jobs for 101 include supplying isolated lighthouses, relighting navigation

buoys which have gone out, and sometimes acting as a small icebreaker during winter conditions.

Equipped with a steel hull and aluminum superstructure, the craft is fitted with the latest navigational and electronic equipment, including radar, Loran, an echo sounder, automatic direction finder, radio telephone and citizen's band.

In addition, the lifeboat is equipped to tow vessels as much as 60 feet long and is also fitted with fire fighting equipment.

The lifeboat has a complement of six men, divided into two crews consisting of a coxswain and two boatmen.

All hands are from Clarks Harbour and all are full time employees of the Canadian Coast Guard recruited specially to man the lifeboat.

All are former fishermen who owned their own craft at one time and all are thoroughly familiar with fishing operations and the local knowledge necessary for such an operation.

Each crew maintains a seven-day, 24-hour-a-day shift, with one man always on watch to monitor radio telephone equipment and acknowledge calls for assistance.



# PAKISTAN POSTING

by A. R. Berry  
Regional Meteorological  
Communications Officer  
Winnipeg



*Mr. Berry has just returned to his duties in Winnipeg after spending two and a half years as a communications adviser to the Pakistan Meteorological Department under the auspices of the World Meteorological Organization's technical assistance program.*

*Mr. Berry (seated, second from right) is shown with the first graduating class of Pakistani meteorological communicators.*

*Seated at centre, next to Mr. Berry, is M. Samiullah, director of the Pakistan Weather Service.*

My main assignment in Pakistan was to assist in the re-organization of the meteorological telecommunications network and the associated territorial broadcast in order to reduce the transit time of weather reports from the initial observation through the national forecast offices and on to the final WMO World Weather Watch network.

During my stay, I had the wholehearted co-operation of the officers of the Pakistan Weather Service. Working together, we were able to establish relay centres and meet 60 per cent of our main objective which was to establish a satisfactory distribution of weather reports within international deadlines.

To meet the total objective will require additional equipment and additional foreign exchange but, with WMO assistance, the final objective is now at least in view.

An adjunct to my main duties was the establishment of a school of training for meteorological communicators.

The national languages, Urdu and Bengali, were used in the training courses but the students, mostly the equivalent of high school graduates, were only able to read and write English with the exception of a few who could speak it.

Those attempting conversational English had some difficulty with my Canadian accent and my tendency to speak too quickly. But the barrier was overcome by working through senior supervisors and officers who speak English fluently, so my lectures were passed to the students through them.

My wife and I found Pakistanis to be very friendly and hospitable. We were invited to their homes and were eager to learn of their culture and customs, which we found interesting and novel.

We were introduced to the typical Pakistani foods—chappatas, curries, peppers, as well as the sea foods served with a variation of exotic sauces. Some of the dishes were extremely spicy in comparison to our more bland foods, but understanding hosts made allowances for our tastes, cutting down on the spices!

The country itself abounds in points of historical interest, from Peshawar up to the fabled Khyber Pass, to Afghanistan and Kipling's beautiful city of Lahore with the world famous Shalimar Gardens.

The bustling city of Karachi, with a population of nearly three millions, has all modes of transportation, from rickshaws, camels and donkey carts to the

most modern air conditioned passenger cars, trucks and buses.

The more "oriental" atmosphere in East Pakistan was of special interest to us as Canadians, with its junks, sampans and rice paddies.

Although far from home, we were not without Canadian contacts. By coincidence, the WMO communications adviser to Iran, stationed in Tehran, was Art Duffy from Met. headquarters in Toronto. Mr. M. Samiullah, the director of the Pakistan Weather Service, was familiar with our service, having visited Toronto on several occasions and having worked on WMO committees and working groups with two of our former directors, Dr. Thomson and Dr. McTaggart-Cowan.

In addition, a number of Pakistani officers had taken training courses with members of our Canadian Met. service.

In the course of our travels, we also visited Tokyo and Bangkok where it was gratifying to learn of the appreciation of communications officers there for the work we had accomplished in Pakistan as a contribution to the improvement of this vital link in the World Weather Watch network.

*"Career Fair '68," an event designed to assist senior high school students in making a sound decision as to a choice of careers, was held recently in Edmonton. The fair included 100 occupational*

*booths, all providing comprehensive information on available job opportunities. Three of the booths were manned by D.O.T. personnel representing Telecommunications, Meteorology and Air Traffic Control.*

# operation careers

*by R. H. Koester and N. A. Murray,  
Air Services, Edmonton Region*



Despite the fact that involvement in the Career Fair was a pioneer project, the challenge was admirably met by Regional Staffing Officer Bob Whitmore, who acted as D.O.T. co-ordinator of the project.

Combining the talents and imagination of regional staff, the D.O.T. team created three display booths designed to prove interesting and attractive to the students.

As proof of their success, an estimated 6,000 students reviewed the D.O.T. displays and were actually in contact with departmental officers serving at the booths.

Cliff Gleave, regional air traffic control training officer who acted as ATC booth organizer, said a total of 300 grade 12 students showed serious interest in ATC opportunities in the department during the four-day fair.

These students each received a copy of the booklet "A Career in Air Traffic Control" (available from Information Services, Ottawa) and made future appointments to tour the area control centre at Edmonton International Airport.

The students appeared more interested in the booths which displayed "tools of the trade" as used in a particular career or industry.

The personnel manning the Telecom booth discovered that the main "attention-getter" in their booth was a bank of highly sophisticated electronic equipment in the form of a high and ultra high frequency receiver, a visual frequency counter, an oscilloscope that showed audio patterns and a spectrum analyser indicating band widths.

As well as various visual aids, the Telecom booth had a communications link with the nearby meteorological booth. This link was a Model A Sending Tape Teletype in circuit with a Model 15 Teletype Receiver in the Met. booth. The students were eager to punch out messages on tape which were transmitted to the Met. booth two doors down.

The Met. Branch supplemented this teletype activity with an electronic question and answer board, a selection of airway hourlies, aviation forecast tapes and facsimile charts. To keep the information current, forecast tapes and synoptic surface charts were provided daily.



# retirements

## R. E. (Roy) St. John

Roy St. John, superintendent of airports for the Winnipeg region, has retired after 28 years of service with the department. One of the pioneers of Canadian aviation, Mr. St. John and his wife were honored at a dinner dance held at 17 Wing Auxiliary Officers' Mess, Canadian Forces Base, Winnipeg, last June 1.

*W.G. Anderson, regional manager, airports and properties, and Mr. and Mrs. St. John.*

## Mrs. Edith Forward

A lady with more than 10 years of service to the law branch has retired from the Department of Transport.

Mrs. Edith Forward was presented with a gift from her friends and co-workers in the branch, then taken out to a luncheon held in her honor.

Mrs. Forward plans to devote her retirement to her hobbies. In addition to being a talented organist, she is interested in flowers, playing bridge, and in church work.



## A. W. (Fred) Hooper

D. P. Glen, right, regional director of air services at Toronto, presents a wallet to A. W. (Fred) Hooper on the occasion of his retirement from the department after a career spanning more than 40 years in both Canadian military and civil aviation. Mr. Hooper, an operations officer, was shift manager at Toronto International Airport at the time of his retirement.

## H. L. Land

Herbert Louis Land, who has been acting director of the marine hydraulics branch for the past year, has retired after a lengthy government career that included 37 years with the St. Lawrence Ship Channel.

Born in Sweden, Mr. Land came to Canada as a boy and was educated in Chase and Kamloops, B.C.

He entered the service of the Topographical Surveys of the old Department of the Interior, first as an articled pupil, later as a commissioned Dominion Land Surveyor.

He joined the St. Lawrence Ship Channel branch of the old Department of Marine in 1931 and rose to become chief of the branch—now a division of the department—in 1958.

Mr. Land, who was due to retire at 65 last year, stayed on to take over as acting director of marine hydraulics in the absence of Don Ripley, who has just completed a year-long bicultural course in Quebec City.

During his lengthy career, Mr. Land made more than 75 donations of blood to the Red Cross to establish one of the best records of giving among Department of Transport employees.



*Mr. and Mrs. Pennock*

## R. H. Pennock

R. H. Pennock, a man with more than 32 years' service to the Government of Canada, has retired from the Department of Transport. Mr. Pennock has been associated with Air Services accounts since the Department of Transport was formed in 1936.



# “ . . . and that’s the picture.”

You’ll still be able to see him deliver the nightly weather report on CBC television but the familiar face of Central Canada’s best-known weatherman is missing from the Met. Branch’s Bloor Street headquarters in Toronto.

Percy Saltzman has retired from the Department of Transport after 25 years.

Percy made Canada’s first English weather broadcast over television in 1952, the first program on the CBC’s first Toronto station.

He has been active in television ever since while working full-tilt as a meteorological officer and publicity specialist for Met.

Early last summer, as he reached the quarter-century mark of service, Percy decided that it was time to “relax and live a little.”

More than 90 colleagues, including Met. Director J. R. H. Noble, gathered at a special luncheon for an affectionate farewell.

In addition to presentations that included a camera and his 25-year service pin, Percy was given an illuminated crystal ball for use in his weather forecasts and an automatic launching device for the piece of chalk he tosses up and

catches as a trademark on his nightly weathercast.

The veteran telecaster responded with a warm, memory-laden speech in which he recalled some of the joys, crises and personalities that shaped his career with the Meteorological Branch.

Born in Winnipeg, Percy graduated from the University of British Columbia in the early ’30s and went to work as a linotype operator.

He joined the Canadian Weather Service in 1943 and gave forecasting services to Royal Canadian Air Force aircrew and taught meteorology at the No. 1 Air Observing School, Malton, Ontario, during the Second World War.

He worked at Met. headquarters, Toronto, from 1945, serving variously as head of forecast verification, in the public and aviation forecast services, arranging for publicity, writing speeches, planning displays and drafting manuals.

His “second” career began in 1948 with an unpaid weather program on radio station CKEY in Toronto, from where he moved on to CBC radio to help arrange for national weather broadcasts.

He began his television career in 1952,

first appearing with puppets on a program called “Let’s See.”

Then came “Tabloid,” a program of interviews, commentary and, of course, weather. Under its original name and its later title, “701,” the program lasted for a record 10 years and appeared on the network from Kenora to Quebec City.

The program was fun, Percy recalls, because it was done live. The audience reacted with special warmth because of it.

Bags of mail, Christmas presents, mobs of fans at special events, all attested to the program’s appeal until it began to lose its novelty as other programs followed its lead and eventually it was discontinued.

Percy has worked hard at promoting weather services: explaining how meteorologists work, describing the extensive service provided in Canada, and interviewing senior meteorological and departmental officers on his program.

Aside from the promotion of public understanding and appreciation of meteorology, he has attracted a faithful following that await each night the words “. . . and now here’s Percy.”



*Percy Saltzman ends  
25 years with D.O.T.*



# TRANS-CANADA

## L'aéroport de Montréal a son comité consultatif

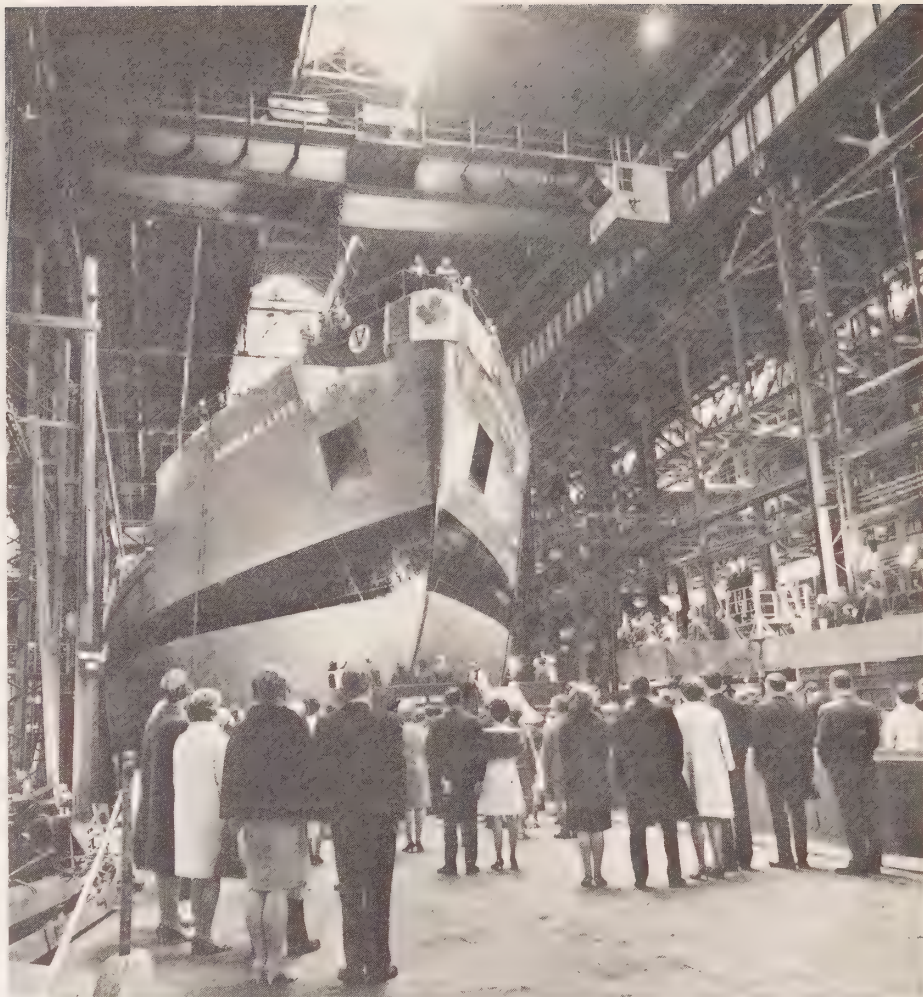
**Montréal**—L'aéroport international de Montréal a maintenant son comité consultatif composé de représentants des trois niveaux de gouvernement—fédéral, provincial et municipal—ainsi que des entreprises aériennes et des corps intermédiaires de toute la région desservie par l'aéroport. Ce comité veut en quelque sorte devenir une tribune où la population intéressée, par l'entremise de ses représentants, aura l'occasion de faire valoir ses vues sur les projets du ministère en ce qui concerne l'aéroport et ses services.

Il s'agit ici d'une initiative du ministère qui se propose de former des comités semblables auprès de chacun des principaux aéroports au pays. Le but premier est d'amener les groupements intéressés à participer plus activement au développement de l'aéroport. Par ricochet, la population demeurant dans le voisinage immédiat sera ainsi mieux renseignée sur l'activité courante à l'aéroport ainsi que sur les projets envisagés en vue de l'amélioration des services.

Ainsi, le public en général sera plus conscient du rôle que joue l'aéroport dans la région et de l'influence qu'il exerce sur l'économie du milieu qu'il dessert.

Une vingtaine d'organismes de la région de Montréal étaient représentés lors de la réunion au cours de laquelle on a formé le comité consultatif à Dorval, en mai dernier. On y a retrouvé des représentants du ministère, des autorités municipales de Montréal et des villes avoisinantes, des entreprises aériennes, du gouvernement provincial et de certains corps intermédiaires, dont, entre autres, la Chambre de commerce du district de Montréal, le Conseil d'expansion industrielle de Montréal et le Montreal Board of Trade.

A cette occasion, on a élu un premier exécutif qui se compose d'un président, M. Gilles Chatel, du Conseil d'expansion industrielle de Montréal; de deux vice-présidents, MM. Jean-Pierre Gagné, de la Chambre de commerce du district de Montréal, et Maurice Arless, du Mon-



**ICEBREAKER NAMED FOR WARTIME MINISTER**—CCGS *Norman McLeod Rogers*, the first icebreaker in the world to use gas turbine electric propulsion for booster power, was launched recently at the Montreal shipyards of Canadian Vickers Limited. The ship, which will function as a powerful icebreaking unit in the Gulf of St. Lawrence, was christened by Mrs. R. MacLeod Rogers of Halifax, N.S., daughter-in-law of the wartime minister of national defence for whom the ship was named. Mr. Rogers held office at the time of his death in an airplane crash in 1940.

treal Board of Trade; et de quatre directeurs, MM. Paul Laliberté, de Montréal, J. P. Bernier, de Dorval, Yvon Gariépy, de la Cité de St-Laurent, et Hervé Lesage, d'Air Canada.

Le ministère compte quatre représentants au sein du comité consultatif. Il s'agit de MM. Maurice Baribeau, directeur régional des Services de l'Air; C.-E. Delisle, administrateur régional à la gestion des aéroports et des biens; P. Lacaille, régisseur régional de l'aviation

**BRISE-GLACE NOMMÉ D'APRÈS UN MINISTRE DU TEMPS DE GUERRE**—Le n. g. c. c. «Norman McLeod Rogers», navire à propulsion électrique, est le premier du monde à utiliser des turbines à gaz pour produire un supplément de puissance. Il a été officiellement lancé récemment aux chantiers navals de Canadian Vickers à Montréal. Le brise-glaces, qui sera utilisé dans le golfe Saint-Laurent, a pour marraine Mme R. MacLeod Rogers d'Halifax (N.-É.) belle-fille du ministre de la Défense nationale durant la guerre, M. Norman McLeod Rogers. Ce dernier a péri dans un accident d'avion en 1940 alors qu'il était ministre.

civile; et J. E. Goulet, directeur de l'aéroport international de Montréal.

De plus, M. Léopold Brochu, surintendant régional des services aux aéroports, agira comme secrétaire auprès du comité exécutif, tandis que M. Maurice Pitre, division du contrôle de la circulation aérienne, sera le coordonnateur dont la tâche, entre autres, consistera à préparer les réunions du comité et à faire le lien entre le comité et les divers services de l'aéroport.



## Montreal Airport Forms Consultative Committee

*Montreal*—A consultative committee on airport development has been organized at Montreal International Airport.

The committee includes representatives from the federal, provincial and municipal governments as well as representatives of the airlines and other interested groups in the area served by the airport.

The main purpose of the committee is to establish a forum from which the department can consult the community about plans for airport development and the community can, in turn, raise matters of community interest.

Consequently, it will serve to better inform the public on current activities at the airport and on plans for its future development.

Formed on the department's initiative the Montreal committee is one of a number to be set up at major international airports across Canada.

Representatives from 20 groups were on hand for the first meeting of the Montreal committee which was held at Montreal International Airport last May.

Members elected to the committee's executive include Gilles Chatel, of the Montreal Industrial Expansion Council, president; Jean-Pierre Gagné, of the Chambre de commerce du district de Montreal, and Maurice Arless, Montreal Board of Trade, vice-presidents; and four directors, Paul Laliberté, Montreal, J. P. Bernier, Dorval, Yvon Gariépy, Cité de St-Laurent, and Hervé Lesage, Air Canada.

Departmental officers who are members of the committee are Maurice Baribeau, regional director of air services, C. E. Delisle, regional manager of airports and property, P. Lacaille, regional controller of civil aviation, and J. E. Goulet, airport manager at Montreal.

## «Au jour le jour» primé

*Toronto*—Le film «Au jour le jour», production de l'Office national du film sur le service météorologique canadien, vient de remporter un prix au Festival international du film à Rome.

Le film a remporté le trophée dans la classe des films d'information technique et industrielle inscrits au «Grand prix de la technique cinématographique».

«Au jour le jour», sur pellicules de 35 millimètres, en couleur, a été réalisé en collaboration avec le Service météorologique du ministère des Transports. Il est

actuellement en montre dans diverses salles de cinéma au pays. Il sera bientôt disponible sur pellicules de 16 millimètres et mis ainsi à la disposition du public en général.

Le film sera également mis en circulation auprès de nos missions diplomatiques et commerciales à l'étranger.

## Met. Film Wins Award

*Toronto*—The recently-released National Film Board color film "In One Day," the first film ever made on the work of the Canadian weather service, has been awarded a prize at the recent International Film Festival in Rome.

"In One Day" won the trophy in the category films of technical and industrial information in the "Grand Prize of Cinematographic Technique," held in conjunction with the Electronic, Nuclear, Teleradio and Cinematographic Exhibition in Rome, Italy.

The 35-mm film, produced in English and French by the NFB in co-operation with the Meteorological Branch, is currently showing in theatres across Canada and will soon be widely available in 16-mm for general public use.

The film will also be distributed to all Canadian diplomatic and trade posts abroad.

## Transfert de responsabilités

*Ottawa*—Se conformant à une décision de l'Organisation de l'aviation civile internationale qui n'admet pas les véhicules à coussins d'air dans la classe des avions, le ministère des Transports a donc transféré la responsabilité de ces véhicules de la Division des normes et règlements de vol à la Direction des règlements de la marine.

Pour marquer le transfert des responsabilités, on a organisé une brève cérémonie dans les bureaux du chef de la Division des normes et règlements de vol, M. M. M. Fleming. Ce dernier a présenté au directeur des règlements de la marine, M. R. R. Macgillivray, une maquette d'un aéronef de fabrication anglaise.

Ce changement s'imposait du fait que ce nouveau type de véhicule, à l'heure actuelle, est surtout utilisé comme moyen de transport sur l'eau bien qu'il serve également sur la terre ferme.



Mr. Macgillivray and Mr. Fleming

## Air Cushion Vehicles

*Ottawa*—The responsibility for air cushion vehicles has been transferred to the marine regulations branch from the flight standards and regulations branch.

Formal observance of the changeover took place recently in the office of M. M. Fleming, chief of flight standards and regulations.

Mr. Fleming handed over a model of a British-built hovercraft to R. R. Macgillivray, director of marine regulations.

The changeover will assist in more efficient administration of the design, construction, maintenance and operation of this new type of vehicle which presently operates in a marine environment.

The change in administration also conforms with the resolution of the International Civil Aviation Organization which recently decided not to classify air cushion vehicles as aircraft.

## The Price of Freedom

*Ennadai, N.W.T.*—The right to vote is taken seriously at this D.O.T. weather station, a four-man outpost located 380 miles west of Churchill, Man.

The reason: It cost the taxpayer more than \$70 so that each man could vote in Canada's recent federal election.

The returning officer for the country's largest riding had to make a flying trip to the post to appoint an enumerator, a deputy returning officer and a poll clerk in addition to making sure that the poll received a ballot box and four ballots.



# Transport ALBUM des Transports



## CCGS Sir Humphrey Gilbert

The Canadian Coast Guard Ship *Sir Humphrey Gilbert*, named after the nobleman who established England's claim to ownership of Newfoundland in 1583, is a heavy icebreaker based at the Department of Transport Marine Services Base, St. John's, Newfoundland.

LENGTH: 220 feet

BREADTH: 48 feet

DRAFT: 16.4 feet

POWER: Diesel Electric, 4250 SHP

GROSS TONNAGE: 1,931 tons

## Le N.G.C.C. Sir Humphrey Gilbert

Le brise-glace *Sir Humphrey Gilbert*, nommé d'après celui qui, en 1583, a revendiqué Terre-Neuve au nom de l'Angleterre, est attaché à l'agence de la marine du ministère des Transports à St. John's, Terre-Neuve.

LONGUEUR: 220 pieds

LARGEUR: 48 pieds

TIRANT D'EAU: 16 pieds, 4 pouces

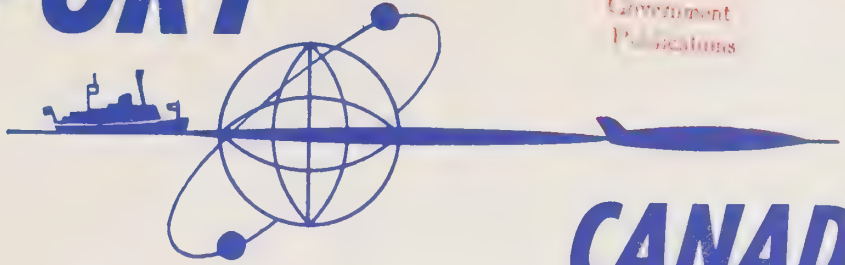
PUISSANCE: diesel-électrique, 4,250 cva

JAUGE BRUTE: 1,931 tonneaux

# TRANSPORT

NOVEMBRE-DÉCEMBRE • 1968 • NOVEMBER-DECEMBER

Government  
Publications



# CANADA



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*TRANSPORT is a staff magazine published by the Information Services Division of the Department of Transport, Government of Canada, under the authority of the Minister, Hon. Paul T. Hellyer.*

Editor Bryan R. Goodyer

ROGER DUHAMEL, F.R.S.C., QUEEN'S PRINTER AND CONTROLLER OF STATIONERY, OTTAWA, 1968

*TRANSPORT est la revue des employés publiée par la Division des services d'information du ministère des Transports, gouvernement du Canada, avec l'autorisation du ministre, l'honorable Paul T. Hellyer.*

Rédacteur français Édouard Deslauriers

ROGER DUHAMEL, M.S.R.C., IMPRIMEUR DE LA REINE ET CONTROLEUR DE LA PAPETERIE, OTTAWA, 1968



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### the search for a new symbol

Sixty-nine entries in the Department's Symbol Contest were received by the Oct. 1 deadline.

As this issue goes to press, the Symbol Contest Committee has been selected and the first meeting to review the submissions was being held.

Full details of the Contest, including the name of the winner and the winning design, will be carried in the January-February 1969 issue of TRANSPORT

### le choix d'un symbole

Au moins soixante-neuf dessins ont été soumis avant la date-limite du 1<sup>er</sup> octobre dans le cadre du concours organisé en vue de trouver un nouveau symbole qui illustrera les initiatives et buts du ministère des Transports.

Au moment d'aller sous presse, le Comité du symbole avait déjà tenu une première réunion au cours de laquelle on a passé en revue les diverses inscriptions reçues.

Des renseignements détaillés sur le résultat du concours, comprenant le nom du gagnant et le dessin primé, seront publiés dans notre numéro de janvier-février 1969.

## THE CHALLENGE OF '69



*Nineteen sixty-eight has been a year of accomplishment for the Department of Transport and everyone of us in the D.O.T. family can be proud, as I am, to be part of an organization so vital to the daily lives of all Canadians.*

*The new year brings with it the opportunity and the challenge of even greater accomplishment for all of us. I join you in looking forward to 1969 with confidence and enthusiasm.*

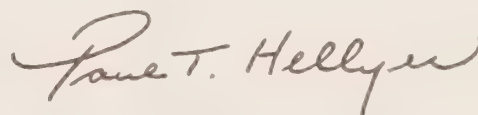
*May I extend to all of you and your families my warmest personal wishes for a Merry Christmas and a happy and prosperous New Year.*

## L'ANNÉE 1969 NOUS CONVIE À L'ACTION

*Pour le ministère des Transports, 1968 a été une année fructueuse, et tous les membres de cette grande famille que constitue notre ministère sont fiers, ainsi que je le suis, de faire partie d'une organisation qui joue un rôle aussi vital dans la vie quotidienne de tous les Canadiens.*

*La nouvelle année nous apporte un nouveau défi et une nouvelle occasion d'atteindre à des réalisations plus grandes encore. Avec vous, j'envisage en toute confiance et avec enthousiasme l'année 1969.*

*Je désire vous exprimer, à vous ainsi qu'à vos familles, mes meilleurs vœux personnels pour un joyeux Noël et une bonne et heureuse année.*



Ministre

Minister





## BEST WISHES

*My best wishes to all of you on the Christmas occasion of remembrance and greeting. The loyal support of departmental staff and their interest in all tasks of the Department have continued to make Transport a challenging and effective area in which to work. My family and I are grateful to departmental staff at all levels, and to their families. May your own satisfaction and interest continue in the New Year, and may it be a happy and successful year for you.*

## MEILLEURS VOEUX

*Mes meilleurs voeux à chacun d'entre vous à l'occasion de la fête de Noël, jour de souvenir et d'accolades. Le soutien loyal des fonctionnaires du Ministère et l'intérêt qu'ils ont porté à tous ses travaux ont contribué à maintenir aux Transports une atmosphère de travail efficace et qui convie à l'action. Ma famille et moi-même en sommes reconnaissants au personnel du Ministère à tous les niveaux ainsi qu'à leurs familles. Puisse votre propre satisfaction et l'intérêt que vous manifestez se maintenir pour la nouvelle année, et qu'elle soit bonne et heureuse pour vous tous.*

Deputy Minister

Sous-ministre

# Taking the frustration OUT of flying



by Ralph Azzie, Chairman  
National Facilitation Committee  
Canadian Transport Commission

When you're returning from a trip abroad, is there anything that drives you closer to the fringe of madness and frenzied frustration than the pure and simple torment of waiting? It's the same the whole world over . . . nothing does more to tie your nerves in knots and play havoc with your patience than the inevitable web of official red tape involving visa and passport checks, health exams, baggage clearances and a myriad of other delays that every international traveller encounters when his aircraft taxis up to the terminal.

Well, everyone knows it's "the same the whole world over", and we all grudgingly recognize the need for such delays. We all know why Health, Customs, Immigration and other government inspections and controls are necessary and that they are there to serve the best interests of everyone in the land . . . But that doesn't get the traveller where he wants to go. Returning Canadians, settlers, visitors—whoever they happen to be—all have a single aim. They know where they're headed and they want to get there fast! . . . and what's being done to ensure the traveller gets what he wants? Much more than most people imagine!

To parody a currently popular tune, "There's a kind of a 'rush' all over the

world today"—and the rush has been on for some time by everyone involved or interested in the field of international air transport, to anticipate and eliminate all foreseeable problems of congestion and delay at our major terminals.

For this reason, the National Facilitation Committee was re-activated two years ago to probe into and pore over every facet of international air passenger and cargo processing. The aim of this organization is to step up, streamline and refine all procedures, formalities and requirements to the "nth" degree—before mushrooming air carrier operations make the task impossible with their supersonic and super-sized aircraft.

Experts have forecast that within the next eight years, the volume of air traffic will jump to 10 times what it is today. If you feel this sounds a bit far-fetched, consider for a moment that within the next two or three years Jumbo Jets will be touching down at our larger international airports with anywhere from three to four hundred passengers per craft. These giants will be followed by supersonics, for whom a "hop" across the Atlantic will be nothing more than that.

In the face of these developments alone, it can be easily seen that the need for accelerated and intensive facilitation measures could never be more critical.

Last May in Montreal, the Facilitation

Division of ICAO held a three-week meeting with some 300 delegates from 63 countries and 11 international organizations to look at air traffic control, inspection and facilitation problems from a global standpoint. The main theme of this meeting was to propose and discuss the simplification of methods and procedures in use throughout the world, to move passengers and cargo as quickly and easily as possible without the sacrifice of controls considered essential for the protection of each member country.

With that many representatives from that many countries and organizations, someone's bound to come up with a few good ideas. There were plenty of them, and some of the ideas were developed into sound, workable concepts which in turn became real issues—focal points of multinational interest and concern.

Canada's contribution towards more simplified controls, smoother inspection procedures and faster, better clearance arrangements for international travellers is far more than considerable. Several government departments and agencies are testing or have already implemented new passenger/cargo processing methods to curb the air terminal congestion anticipated with the arrival of Jumbo Jets and supersonics which are so soon to make their inter-continental debut.

For example, last year saw the develop-



ment of a coordinated system of Customs-Immigration air passenger examination, which began at Montreal International Airport, spread to Halifax, Ottawa and Toronto, and is now in the process of being instituted in Vancouver. This system permits faster movement of passengers who do not require more than a cursory examination by either Customs or Immigration and allows officers of both services to examine more carefully those passengers in whom they have a greater interest. The new procedure is far more sophisticated, yet so simple it's surprising . . . The residential status of the passenger (no matter what it is) provides the key to faster, smoother entry and release formalities. He either goes through primary Customs or primary Immigration examination processes, (depending on his status as a Canadian, visitor or immigrant) and is on his way, or is directed to the appropriate secondary Customs or Immigration room to clarify official points of interest regarding his entry or the release of his effects.

Thanks to a "selective" system of baggage checks introduced by Customs, many air travellers entering Canada through such centres as Montreal, Halifax and Toronto are not even required to present their baggage for physical examination.

Also in 1967, the Department of Manpower and Immigration kicked off an entirely new concept in relation to the handling of Canada-bound air travellers. Through the cooperation of Air Canada, CPA and the government departments involved, Canada's Health & Welfare, Immigration, Customs and Agriculture officials have been testing out a passenger clearance facilitation scheme that is certain to lighten the load of air traffic worries the future is bound to bring.

Since last January, inspecting officers have accompanied passengers on six flights to Canada and actually conducted complete en route clearance formalities. This meant that a sizable number of the passengers could step off the plane, pick up their baggage and shuffle off to their destinations, with not much more than a nod to waiting officials and traditional practices.

These tests are being carried out to perfect a system which would supplement and support existing inspection procedures on arrival at airport terminals, rather than supplant them. They are geared to help meet the demand of large capacity aircraft soon to come into service and would be used only until adequate ground facilities are available to revert to the normal inspection procedures.

Canadian officials have been studying the feasibility of a totally new passport concept, which would shorten document inspection, speed up passenger examinations and record full particulars of the visitors passport data for control and statistical purposes.

The passport would be in the form of an embossed card, from which pertinent data could be extracted by mechanized means, much as in the manner of a common credit card.

One more significant feature of the passport card would be the elimination of the time-consuming task of recording the data by hand, as is done at present.

Another experiment being undertaken in Canada could result in one of the biggest boons a foreign businessman operating internationally could hope for.

The concept under study is a "facilitation card" which would permit the holder to by-pass normal inspection points and go directly to the baggage claim area. Applications for the card would be accepted from reputable businessmen with the necessary references, and issued following interview by Canadian government officials abroad.

During the "life" of his card a foreign businessman could make an unlimited number of "routine inspection free" entries into Canada and the privilege would be timed to expire on the expiry date of his smallpox vaccination certificate.

Canada's problems with respect to making international travel and transportation "fret-free and easy" can be viewed in direct relation to its size. This is doubtless one of the reasons that this country has displayed such initiative, interest and concern with all advanced passenger and cargo facilitation concepts. Many government document and cargo handling procedures have been standardized, simplified or even eliminated by Customs in the interest of expediting and facilitating the clearance and delivery of goods being imported. The procedures now in effect have, among other things, resulted in a reduction of Customs physical controls over the



flow of goods, and consequently, a significant lessening of storage space requirements at station operations in Canada.

As the new system is compatible with computer operations of air carriers, it helps to pave the way for an eventual electronic data processing system which will serve both carrier and Customs purposes.

The year's first issue of this magazine touched upon yet another area in which the Department of Transport is carrying out carefully scheduled programs for the expansion and development of ample and adequate air terminals to cope with imminent needs. This very important feature of facilitation planning is covered in an article that asked (and admirably answered) the question; "Jumbo Jets—Are We Ready?"

To provide assurance that we will be

ready, there is a parallel committee designated as the Interdepartmental Inspection Services Committee under the chairmanship of the Department of Transport. Representatives of the various inspection services are members of both the National Facilitation Committee and the Interdepartmental Inspection Services Committee. Their role in this latter committee is to develop procedures for the practical application of many of the concepts on measures for facilitation.

The Department of Transport formed the I.I.S. Committee when they recognized that the only solution to the problems presented by the impending arrival of larger aircraft and heavier passenger volume would be to apply a total systems concept to airport terminal design. The activities of airlines and each inspection agency are examined in depth by analysts

and consulting architects in an attempt to point the way to more efficient, faster and more flexible passenger processing systems and techniques. With the information, DOT will be able to map out their plans and chart their progress towards providing the physical facilities to meet every requirement.

The above examples are only a few of the thoughts put forth and acts performed at the seventh session of the Facilitation Division last May. We could go on with this recitation of aspirations and achievements until the cows come home but at this moment, cows aren't precisely the commodity the Facilitation Division has in mind. As one TV commercial so relentlessly drums in our ears, what Facilitation is concerned with is, "people . . . People . . . PEOPLE!"

## La "simple formalité" sera simplifiée

L'avion vient de décoller d'Orly, en France, à destination de Montréal. L'appareil file à 300 milles à l'heure. Un Canadien, revenant de son premier voyage à l'étranger par avion, s'y repose confortablement à bord, méditant sur les bons moments passés en vacances. Il a hâte maintenant de revoir les siens, car il en a long à raconter sur son voyage.

Bientôt l'appareil touchera le sol canadien. "C'est la façon idéale de voyager, se dit le Canadien. En moins de sept heures, on a traversé l'Atlantique, et l'on arrive chez soi encore frais et dispos!"

Notre voyageur ne se doute certes pas de ce qui l'attend à son arrivée à l'aéroport. Il sait fort bien qu'il doit passer au service de santé, à la douane et à l'immigration, mais, pour lui, c'est une simple formalité, bien nécessaire tout de même, et qu'on ne devrait surtout pas critiquer.

Il se rendra vite compte cependant que cette "simple formalité" peut prendre plusieurs heures à s'accomplir. Comme les autres, il fera la queue aux comptoirs alors qu'on examine ses bagages, vérifie son passeport et qu'on lui fait enfin subir tous les autres examens exigés par les lois du pays. Tout cela est pour sa protection et pour celle des siens, mais la procédure est parfois lente et les heures d'attente exaspérantes. La "simple formalité" risque ainsi de gâter tout le plaisir du voyage.

Il ne s'agit certes pas d'une situation propre uniquement au Canada. Le pro-

blème est le même dans tous les pays du monde. Mais que fait-on pour accélérer les procédures d'accueil à l'aéroport et ainsi enrayer cette période de tension que le voyageur trouve insupportable?

Au Canada, ces derniers temps, avec la collaboration des lignes aériennes et des divers services gouvernementaux intéressés—santé, douane, immigration et agriculture—on a mis à l'essai divers nouveaux procédés qui devraient simplifier les choses. L'an dernier, aux principaux aéroports, on a combiné les services de douane et d'immigration, éliminant ainsi certains comptoirs et accélérant la procédure.

Encore en 1967, afin d'atténuer la congestion aux aéroports canadiens à l'arrivée des envolées internationales, on a placé à bord de certains vols du personnel chargé de soumettre les voyageurs aux examens de routine.

Cette initiative n'a évidemment pas pour but de supplanter les services à l'aéroport. Il s'agit plutôt de mettre au point un service nouveau qui servira de complément au travail des officiers de la santé, de la douane et de l'immigration. L'avènement prochain d'aérobuses géants pourrait en effet justifier l'instauration d'un tel service, du moins jusqu'à ce qu'on ait pu prévoir, au sol, les aménagements nécessaires pour accueillir le plus grand nombre de voyageurs.

Une autre innovation à l'étude est au

chapitre des passeports. Ces derniers pourraient prendre la forme d'une carte ressemblant en quelque sorte à une carte de crédit permettant d'extraire rapidement l'information gravée en relief. Il est également question d'émettre, dans certains cas, des permis exemptant les voyageurs de certains services d'inspection. Ces permis pourraient être accordés, selon de strictes normes gouvernementales, aux personnes devant fréquemment effectuer des voyages d'affaires de par le monde.

À Montréal, en mai dernier, au cours d'une séance d'étude de trois semaines groupant des représentants de 63 pays et de 11 organisations internationales, le Canada a eu l'occasion d'exposer les mesures qu'il a déjà adoptées pour simplifier les procédures d'entrée au pays ainsi que celles qui sont encore à l'état de projet. Cette réunion a été tenue sous les auspices de l'Organisation de l'aviation civile internationale qui dispose d'un service spécial s'adonnant précisément à l'étude de moyens permettant de simplifier les procédures à l'arrivée des voyageurs aux principaux aéroports du monde.

Il reste évidemment beaucoup à faire en ce domaine, mais les spécialistes ont confiance de trouver les solutions avant l'atterrissage chez nous du premier aéronef géant qui déposera aux portes de l'aéroport ses quelques 500 passagers.



# c'est ça, le bilinguisme

par Edouard Deslauriers  
Services d'information

Devenir bilingue à l'âge de 50 ans n'est certes pas chose facile. M. Donald Ripley, directeur de l'hydraulique maritime au ministère des Transports, en sait quelque chose. "Mais c'est tout de même une enrichissante expérience qui vaut la peine d'être vécue", dit-il. Il se voit maintenant lancé à la découverte d'un monde nouveau à une période de sa vie où il croyait avoir exploré à peu près tous les champs du savoir.

Pendant plus de la moitié de sa vie, la langue de travail, pour Don Ripley, n'aura été uniquement que l'anglais.

Depuis à peine quelques mois, il a maintenant recours aux deux langues dans l'exercice de ses fonctions, et cette situation, nous dit-il, est devenue pour lui une nouvelle source de satisfaction personnelle dans son travail de tous les jours. Son grand regret, affirme-t-il, c'est de ne pas avoir eu plus tôt l'occasion d'apprendre cette autre langue du pays.

Le français qu'il maîtrise aujourd'hui avec une certaine facilité, M. Ripley l'a acquis pendant un séjour d'un an à l'université Laval de Québec, dans le cadre du programme d'enseignement des langues parrainé par la Commission de la fonction publique. Lui et son épouse sont demeurés dans la ville de Québec, totalement immergés dans un milieu francophone, pendant toute la durée des cours, soit de juillet 1967 à juillet 1968. M. Ripley fréquentait la faculté des Lettres de l'université alors que son épouse s'adonnait également à des cours de conversation française, permettant ainsi au couple d'approfondir, dans l'intimité du foyer, leur connaissance de la langue seconde.

Plonger ainsi dans l'inconnu, si l'on peut dire, et apprendre à maîtriser en un an une langue qui nous est étrangère n'est certes pas une sinécure. M. Ripley admet d'ailleurs que les difficultés du début lui ont d'abord paru insurmontables. La période d'adaptation a été longue et pénible. L'effort mental exigé pour tenir le coup a

été tel qu'il a maintes fois songé à tout abandonner et à revenir à Ottawa.

Il faut dire que M. Ripley, avant son départ pour Québec, n'avait à peu près aucune connaissance du français. Son vocabulaire dans cette langue pouvait se limiter à "oui", "non" et "bonjour". Né à Truro, en Nouvelle-Ecosse, il n'avait eu l'occasion de prononcer ses premiers mots de français qu'en arrivant au High School. Plus tard, à l'université Dalhousie et à Queen's de Kingston, où il a décroché son diplôme en génie civil, on l'avait astreint à une heure de français par semaine. Les quelques notions de français ainsi acquises ont cependant été vite oubliées, lorsque M. Ripley est passé au monde du travail où la seule langue utilisée était l'anglais.

"Bien entendu, dit-il, avant de passer à Laval, je me demandais, sans doute comme bon nombre de mes concitoyens de langue anglaise, quel bénéfice j'aurais enfin à tirer de la connaissance du français. Je n'en voyais guère l'utilité. Ayant œuvré avec succès dans une seule langue pendant plus de la moitié de ma vie, pourquoi donc me creuser les méninges aujourd'hui pour apprendre une langue que je n'arriverai peut-être jamais à maîtriser correctement et dont, de plus, je ne me servirai sans doute que bien rarement?"

Depuis qu'il a complété son cours, cependant, M. Ripley voit les choses autrement et regrette même de ne pas s'être imposé cette discipline plus tôt alors qu'il lui aurait été certes beaucoup plus facile d'acquérir et mieux maîtriser la langue. Il voit maintenant s'ouvrir devant lui un monde nouveau qui lui était jusque là pratiquement inconnu. Il lit les journaux d'expression française, regarde la télévision française et s'intéresse davantage à tout ce qui se passe au Québec et plus particulièrement à la question du bilinguisme au pays. Il peut ainsi se faire une idée plus juste des difficultés à surmonter dans ce domaine des deux côtés de la clôture.

"Le Canada est un pays bilingue, dit-il.

"C'est un fait qu'on a trop longtemps refusé de reconnaître. L'usage des deux langues dans nos communications sur le plan international ne peut d'ailleurs que relever le prestige du Canada aux yeux du monde. Pour l'individu, c'est une richesse qui lui permet de vivre pleinement sa vie chez lui et qui, de plus, lui ouvre la porte d'à peu près tous les pays du monde, le français et l'anglais étant les deux langues principales de communication internationale."

M. Ripley joint maintenant les rangs de ceux qui préconisent l'instauration par tout le pays d'un programme d'enseignement des deux langues dès les premières années du cours primaire. Cet enseignement devrait se poursuivre et même être intensifié au secondaire et à l'université afin de bien préparer la nouvelle génération au rôle qu'elle aura à jouer dans un pays bilingue.

Mais ce n'est pas tout d'apprendre une langue nouvelle. Il faut surtout trouver les moyens de la conserver. Et c'est peut-être la chose la plus difficile à l'heure actuelle, à cause de la prédominance de l'anglais comme langue de travail un peu partout au pays.

M. Ripley n'a tout de même certes pas l'intention de perdre ce qu'il a réussi à acquérir avec autant de peine. Au bureau, il a demandé à son personnel d'expression française de s'en tenir au français dans toute communication écrite ou orale avec lui. De même, ayant quotidiennement l'occasion de faire usage du français, il réussira à approfondir davantage ses connaissances de la langue.

Chaque jour, il consulte les journaux de langue française, et, en voyageant du bureau à son domicile, près de Cornwall, il demeure à l'écoute de la radio française. En soirée, la télévision lui fournit l'occasion d'enrichir encore son vocabulaire. Disons en passant que René Lecavalier vient de se gagner un nouvel admirateur. M. Ripley le classe déjà parmi les meilleurs

commentateurs sportifs au Canada.

"Mais tout ceci n'est peut-être pas encore suffisant, souligne M. Ripley. C'est pourquoi j'estime qu'un débutant devrait être replongé dans un milieu uniquement français au moins quatre fois par année pour une durée d'une semaine à la fois."

Au sujet de son séjour à Québec, M. Ripley raconte, sans amertume toutefois, qu'il a eu à essuyer au début l'indifférence des Québécois. "J'aurais voulu qu'on se montre un peu plus sympathique à mon endroit, dit-il. J'étais disposé à faire l'effort, et je cherchais leur compréhension. Je réalise cependant que c'était sans doute un peu trop taxer leur patience que de chercher à m'entretenir avec eux dans une langue qui m'était si peu familière."

Peu à peu toutefois, les barrières ont tombé et les rapports sont devenus plus faciles. Vers la fin de son séjour dans la Vieille Capitale, le couple Ripley comptait plusieurs bons amis chez les Québécois.

M. Ripley soutient qu'il aimait surtout aller s'entretenir avec les propriétaires de petites boutiques sises dans le voisinage de son logis. "Ils étaient particulièrement sympathiques et nous encourageaient dans nos efforts", dit-il.

"Au début, dans les moments difficiles, ajoute M. Ripley, et assez souvent même par la suite, surtout lorsque je me sentais en proie au mal du pays, j'allais visiter nos gens à l'Agence de la marine du ministère à Québec. Là, entouré d'amis de longue date et dans l'ambiance d'un milieu connu, je n'éprouvais aucune difficulté à me faire comprendre, que ce soit en français ou en anglais. C'est ça le bilinguisme!"

M. Ripley conserve un excellent souvenir de son séjour à Québec. Dans l'exercice de ses fonctions au ministère, il aura l'occasion d'y retourner souvent. "Chaque fois que je séjournerai au Québec, dit-il, je chercherai évidemment à enrichir davantage mon vocabulaire et surtout à mieux connaître encore mes concitoyens de langue française."



M. Don Ripley

## this is bilingualism

Don Ripley, director of the Marine Hydraulics Branch, Marine Services, has just recently returned to his position in Ottawa after completing a year of the Government of Canada's Bilingual and Bicultural Program for senior executives at the Universi-

ty of Laval in Quebec City.

Mr. Ripley's impressions and comments on his year-long study of the French language are recorded in the preceding interview conducted in French by a French-speaking information officer.



# UREA—MODERN APPROACH TO RUNWAY ICE CONTROL

by Bryan R. Goodyer  
Information Services Division

It was one of the worst ice storms the Toronto area had experienced in some years.

Overnight, the force of a winter storm had brought down ice-laden wires and branches. Virtually every form of transportation and communication was affected.

Yet at Toronto International Airport, where such weather might be expected to cancel flights and close the airport, it was business as usual.

Navigable runways were the result of

"Urea," an agricultural chemical used by the Department of Transport and Air Canada to pioneer the first effective ice control technique for runways in the world.

The chemical's use as an ice control agent has been under intensive study for the past two years after its use was pioneered by Mike Hawkins, superintendent of the D.O.T.'s field and grounds maintenance division, and Tony Hink, acting airways engineer with Air Canada.

It all began about seven years ago when

the two men set out to do something about the snow, sleet, ice and slush that plague Canadian airports for about six months of the year.

Snow and slush can be swept by mechanical means, but clear or glare ice cannot be removed even with the most sophisticated machines which either slip over the ice or dig into the pavement.

Thus, during severe runway ice conditions, flights have been delayed or even cancelled and on occasions airports have had to be closed due to lack of braking capability.

Many ideas were investigated to remedy this, such as costly heating of runways, new and better airport maintenance equipment, coating of engine blades and of course the use of ice melting chemicals.

Corrosive action, such as is experienced on cars, cannot be tolerated on aircraft, so Mike and Tony narrowed their search to one for a non-corrosive practical ice-melting chemical.

The Department of Public Works laboratory co-operated by checking out many chemicals for damaging effects on aircraft materials. About four years ago it was decided that a hard look should be taken at the chemical Urea.

Urea (commercial synthetic Acid Amide of Carbonic Acid) is an important agricultural chemical widely used as a soil fertilizer. Used as a de-icer, Urea was spread as small spherical pellets about an eighth of an inch in diameter. The pellets melt into the ice, penetrate to the pave-





ment and loosen the bond between the ice and the pavement surface.

Sufficient pellets "rot" the ice to the extent that it can be broken free and swept and plowed off the runway.

When used as an anti-icer, Urea is spread before or during the early stages of a freezing rain. It lowers the freezing point of water, maintaining the precipitation as a slush which can be readily removed.

Produced by several large chemical manufacturers in Canada, Urea costs about \$90 a ton. Normal application, when used as an anti-icer, requires approximately 1/750 of a pound per square foot. When used as a de-icer, the application rate must be at least double the anti-icing quantity.

Following detailed and extensive investigation by Tom Miller of Air Canada, it was concluded that Urea was safe to use and Mike Hawkins initiated large scale field trials at 20 Canadian airports with the assistance of their airport managers and staff during the winter of 1966-67.

Although conventional runway sanding equipment can and is being used satisfactorily to spread the chemical, certain fertilizer-spreading equipment is extremely effective, providing a single spread of 75 feet and precise quantity control.

A large fertilizer spreader is being developed for airport runway use and it is expected to be able to apply the chemical to a 10,000-foot runway in five minutes.

Field reports indicate that Urea has been very successful when used under the proper conditions. A case in point is Toronto International Airport mentioned earlier which would have been closed for a portion of the time during a severe runway icing condition if it had not been for the use of the chemical.

As the capabilities of Urea are better understood and as techniques and distributing equipment improve, the full benefits of the chemical are being realized.

Prior to the use of the chemical, it took two or three weeks to remove major deposits of ice. Similar or better pavement conditions were achieved with the use of Urea in 48 hours.

A great reduction in sand utilization has been experienced and one alternate international airport reports that, because of use of the chemical, runway ice control sand did not have to be used all winter.

The use of Urea also means considerable maintenance cost reductions to the department as well as to the airlines. There is also a saving because of the reduction in the use of sanding materials. In addition, revenue loss due to the closing of airports and flight cancellations is reduced.

This isn't the end of the story of Urea, however.

Mike Hawkins, in co-operation with Air Canada and the chemical manufacturers, has started feasibility studies and experimentation with a view to enhancing the effectiveness of the ice control properties of Urea by the incorporation of

a color pigment such as blue, black or red. Dark colors possess the natural ability to absorb solar heat and because the Urea pellet is white in color, it does not possess this heat absorptive feature in its manufactured state.

The combination of the ability of Urea to lower the freezing temperature of water along with the advantage of the heat absorptive quality appears to be a very promising feature. The ability to readily observe pellet spread pattern and density by the use of a contrasting dark color may prove to be an appreciable side benefit.

The use of Urea marks the first time on record that chemicals in pellet form have been used on civil airports on a large scale for ice control and removal.

The result has been an increasing number of inquiries from airlines and countries interested in the extremely useful chemical with the result that Canada is now making information on its use available to the world through the International Air Transport Association and the International Civil Aviation Organization.



# A VISIT F VISITE DU



While visiting the bridge aboard CCGS Camsell, Santa stops to talk to the ship's master, Captain John Strand.

Au cours de sa visite à bord du n.g.c.c. CAMSELL, le Père Noël s'entretient avec le commandant du navire, le capitaine John Strand.



On the flight deck, Pilot Bob Jones assures Santa that his Canadian Coast Guard helicopter will speed him on his appointed rounds.

Sur le pont d'envol, le pilote Bob Jones assure au Père Noël que son hélicoptère (de la Garde côtière canadienne) l'amènera rapidement aux endroits qu'il doit visiter.





# M SANTA ÈRE NOËL

There's usually no snow and a Canadian Coast Guard helicopter serves as transportation but, for the children of Department of Transport employees stationed at Vancouver Island lighthouses, Santa's annual visit is one of the most exciting events of their young lives.

Santa makes his annual visit to the lighthouses during the first week in December when the CCGS *Camsell* begins the last lighthouse supply trip of the year loaded with the Christmas orders for the lightkeepers and their families.

The idea of the jolly old fellow's appearance at the remote and sometimes lonely stations began aboard the *Camsell* when the officers and crew suggested that youngsters on the stations would "get a kick out of a visit from Santa."

Though Santa Claus vaguely resembles Second Steward George Thomas, the men of the *Camsell* usually tell questioners that they picked the old gent up while on Arctic duty during the summer, an annual task that takes them into Arctic waters to aid northern shipping.

Il n'y a habituellement pas de neige et c'est un hélicoptère de la Garde côtière canadienne qui sert de moyen de transport, mais pour les enfants des employés du ministère des Transports qui sont affectés aux phares de l'Île de Vancouver, la visite annuelle du Père Noël constitue l'un des moments les plus heureux de leurs jeunes années.

Le Père Noël se rend aux phares chaque année au cours de la première semaine de décembre, soit au début du dernier voyage de ravitaillement des phares de l'année effectué par le n.g.c.c. CAMSELL, qui transporte les commandes de Noël expédiées aux gardiens de phare et à leurs familles.

Ce sont les officiers et matelots du CAMSELL qui ont eu l'idée d'organiser la visite du joyeux vieillard aux stations éloignées et parfois isolées, pensant que les enfants seraient enthousiasmés par une visite du Père Noël.

Bien que le Père Noël ressemble quelque peu au 2<sup>e</sup> commis aux vivres George Thomas, les marins du CAMSELL répondent habituellement aux enfants qu'ils ont recueilli le bon vieux au cours de leur voyage dans l'Arctique, l'été précédent. C'est un voyage que leur navire effectue chaque année pour y aider à la navigation septentrionale.



*Youngsters Annette Platz and Denise Mason get some special attention from Santa at Estevan Point while he talks to the children.*

*Le Père Noël s'occupe particulièrement des fillettes Annette Platz et Denise Masson, tout en s'entretenant avec les enfants d'Estevan Point.*



*His bag noticeably lighter as he nears the end of his tour, Santa is greeted by the children at Spring Island LORAN (long range navigation) station.*

*Son sac considérablement allégé vers la fin de sa tournée, le Père Noël est accueilli par les enfants de la station LORAN (aide à la navigation à grande distance) de Spring Island.*



# transport people



Mr. Notley and S. W. Wellman

## Chief Steward Retires

After a colorful railroading career that has covered thousands of miles across Canada, Wilfred Notley has had enough.

The 60-year-old Mr. Notley, chief steward on the Governor General's private rail cars, climbed down from his post for the last time on Sept. 23.

Mr. Notley, who made his first trip to Ottawa to assist with the Governor General's trips on the official cars in 1927, has served under eight different Governors General, including Viscount Willingdon, the Earl of Bessborough, Lord Tweedsmuir, the Earl of Athlone, Viscount Alexander, Honorable Vincent Massey, General Georges Vanier and the Right Honorable Roland Michener, the present Governor General.

Born in Ireland on Sept. 23, 1908, Mr. Notley came to Canada in 1926 where he joined Canadian National Railways as a pantryman.

He was appointed as a permanent employee of the Department of Transport on April 1, 1941.

During his career, Mr. Notley travelled on the Royal Tour of 1939 and on all royal tours since then.

Prior to his retirement, a small reception was held for Mr. Notley by members of the staff of the Transportation Policy and Research Branch of the department, which looks after administration, operation and maintenance of the official cars.

After brief speeches by S. W. Wellman and A. P. Bennett, Mr. Notley was presented with a monogrammed wallet and travelling case.

## New Chief of Radio Regulations

W. J. (Bill) Wilson, 46, has replaced W. A. Caton as Chief of the Radio Regulations Division of the Government's Telecommunications Policy and Administration Bureau.

The Bureau was recently transferred from the Department of Transport to the Department of the Postmaster General.

A native of Ottawa, Mr. Wilson was formerly Superintendent of Radio Regulations Engineering. He takes over from Mr. Caton who retired last June after more than 44 years of service in radio communications.

Mr. Wilson graduated from Queen's University and began his engineering career in the Northern Electric Company, Montreal.

In 1947, he joined the Marine Radio Service of the Department of Transport and seven years later transferred to the Radio Regulations Division to look after many of the engineering aspects of the use of radio in Canada, including space communication.

## Miss D. R. MacCallum

A lady who came to the Department of Transport "to work for us for a month" more than 40 years ago has retired in Ottawa.

Miss D. R. (Dorothy) MacCallum, administration staffing officer with Central Personnel Services, was guest of honor at a ninth-floor reception held in the Hunter Building and later at a reception held in the Beacon Arms Hotel by her friends and colleagues in the government service.

"Dorothy is very very rich." D. E. DeBow, chief of Central Personnel told the staff gathering. "Not in money, but in the esteem in which we all hold her."

Mr. DeBow paid tribute to Miss MacCallum as "a highly skilled professional personnel administrator" who was a valued member of the Department of Transport staff."



Miss MacCallum and Mr. DeBow

## Aviation Met. Pioneer Dies

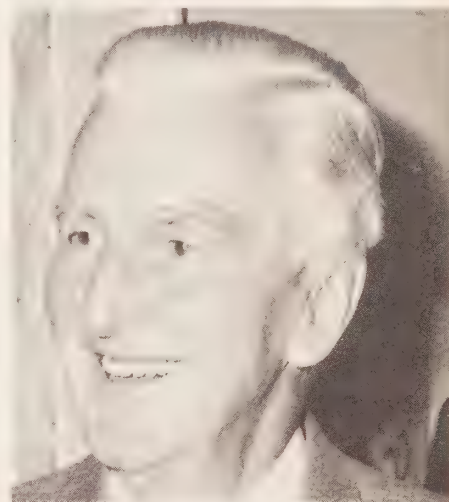
Cyril H. Bromley, a pioneer in the aviation meteorological service, has died in British Columbia.

A native of Liverpool, England, Mr. Bromley emigrated to Canada after the First World War in which he served with the Royal Navy.

He was appointed in 1930 as officer in charge of the first meteorological office at the original site of Calgary Municipal Airport.

During the Second World War, he served with the Royal Canadian Navy, leaving it with the rank of Lieutenant Commander to resume his meteorological work.

He retired in 1956 and went with his wife to live at White Rock, B.C., where he died Aug. 7, 1968.



C. H. Bromley

# JASPER TOURS THE AIRPORT

Many people got a pleasant surprise and — his sponsors hope — the message when Jasper the Bear visited the headquarters staff of the Department of Transport at four Ottawa locations recently.

The purpose of Jasper's visit was to seek support for the United Appeal, whose Public Service Division set a \$789,000 goal for its 1968 campaign.

The visit took Jasper through the headquarters Hunter Building, the terminal building at Ottawa International Airport, the D.O.T. Hangar and Number Three Temporary Building.

At the terminal, Jasper was presented with a five-pound honey pail by Al Watson of Air Services who escorted him on the tour, and introduced him to Miss Wendy Morgan, Miss D. O. T. of 1968.

In the photo top right, Jasper says hello to a young airport visitor. Below, the erstwhile bear and Miss D. O. T. visit with mechanics at the hangar, then Jasper (lower right) took a stroll out onto the parking apron where he got the chance to look over CF-DTA, one of the Department's Viscount aircraft.

## JASPER A ÉTÉ BIEN ACCUEILLI

Partout où il est passé, Jasper a été accueilli à bras ouverts lors de sa tournée récente des services du ministère des Transports à Ottawa. Son message a surtout été bien compris si l'on en juge d'après le succès de la dernière campagne de la Fédération des oeuvres au ministère.

La visite de Jasper avait précisément pour but d'inciter le personnel à donner généreusement à la Fédération, dont l'objectif à la Fonction publique s'élevait à \$789,000.

À l'aérogare d'Ottawa, M. Al Watson des Services de l'Air, qui accompagnait Jasper dans sa tournée, a présenté le "visiteur" à M<sup>lle</sup> Wendy Morgan, reine des Transports pour 1968. À la même occasion, on a remis à Jasper lui-même un seau rempli de cinq livres de miel.

Dans la photo du haut, à droite, on voit Jasper s'entretenant avec un jeune visiteur à l'aérogare. Ci-dessous, il est accompagné de M<sup>lle</sup> Morgan lorsqu'il rend visite aux mécaniciens dans l'atelier du ministère à l'aéroport. Dans la photo du bas, à droite, il se balade sur les pistes de l'aire de stationnement d'aéronefs à l'arrière du hangar du ministère.





# d.o.t. personnel awarded \$1,125 for suggestions

A total of \$1,125 in suggestion awards has been presented to 31 Transport Department employees recently.

The highest single award was a cheque for \$80 that was presented to J. L. G. de Niverville, a clerk at Ottawa headquarters, for a suggestion regarding the consolidation of staff pay certificates that was found to eliminate considerable paperwork and free staff for other duties.

Two men were double winners, both having two ideas accepted almost simultaneously.

They were J. C. Cain of Victoria, awarded a total of \$80,

and John Hawkins of Sandspit, B. C., who was awarded a total of \$55 for a pair of winning ideas.

Women award winners included Mrs. Gertrude Touchette, secretary to the Chief of Information Services, whose suggested change in the Government Directory won her \$25, and Miss M. B. Stone, a stenographer in Vancouver, who was awarded \$15 for a suggestion designed to improve production.

Those who received suggestion awards recently included, in alphabetical order:

NAME	POSITION	LOCATION	AWARD
Andrews, A. A.....	R/Operator.....	Quesnel, B.C.....	\$15
Armstrong, V. C.....	Tech/Elec.....	Calgary.....	25
Bates, L. S.....	Inspector.....	Sydney, N.S.....	40
Bourquin, S. E.....	R/Operator.....	Sidney, B.C.....	15
Cain, J. C.....	Tech/Elec.....	Victoria.....	80
Cromwell, C. R.....	R/Operator.....	Schefferville, Que.....	20
Des Biens, J. L.....	Inspector.....	Cap de la Madeleine.....	50
De Grace, R. F.....	Tech/Elect.....	Shippegan, N.B.....	15
de Niverville, J. L. G.....	Clerk.....	Ottawa.....	80
Elliott, A. W.....	Tech/Met.....	Frobisher Bay.....	35
Foster, G. W.....	R/Operator.....	Princeton, B.C.....	15
Hanch, John.....	R/Operator.....	Bull Harbour, B.C.....	25
Harvey, E. J.....	Tech/Elec.....	Carp, Ont.....	30
Hawkins, John.....	Electrician.....	Sandspit, B.C.....	55
Hockey, C. M.....	R/Operator.....	Vancouver.....	30
Jacobsen, Kenneth.....	Electrician.....	Williams Lake, B.C.....	40
Kocsis, Nicholas.....	Tech/Elec.....	Toronto.....	30
Lang, F. J.....	R/Operator.....	Brandon, Man.....	50
Parker, J. E.....	Tech/Met.....	Ottawa.....	40
Robillard, John.....	Mechanic.....	Victoria.....	30
Sachau, G. K.....	Tech/Met.....	Toronto.....	25
Stanway, L. E.....	Tech/Elec.....	Prince Rupert, B.C.....	50
Steinhaus, Norman.....	Technician.....	Toronto.....	40
Stone, Miss M. B.....	Stenographer.....	Vancouver.....	15
Stossel, D. L. C.....	Tech/Met.....	Resolute Bay.....	60
Thompson, R. D.....	R/Operator.....	Ucluelet, B.C.....	75
Thompson, R. G.....	R/Operator.....	Burwash Landing, Y.T.....	30
Touchette, Mrs. G. M.....	Secretary.....	Ottawa.....	25
Whiston, Stanley.....	Tech/Met.....	Scarborough, Ont.....	20
Whiteside, J. H.....	Inspector.....	Kelowna, B.C.....	35
Workman, R. J.....	Tech/Met.....	Coronation, Alta.....	30

## nearly \$1,000,000 in savings realized through suggestions

The Government of Canada realized savings estimated at \$958,457 in 1967 through its suggestion award plan.

The savings, said E. W. (Ted) Howe, D.O.T.'s suggestion award supervisor, represent about \$200,000 more than the savings reported in 1966.

In outlining some changes in the plan, Mr. Howe said that awards have been increased from 10 per cent to 12 per cent of the actual cash savings, which means that the maximum award on a suggestion with savings of \$5,000 for example has increased from \$500 to \$600.

In other changes, Mr. Howe said that awards in kind (those involving merchandise) have been discontinued in favour of cash awards, while awards for suggestions with intangible benefits (safety suggestions, an improvement in service) have been increased from \$100 to \$200.

However, participation in the suggestion award plan remains restricted to the junior management level or below.

Mr. Howe said the Department of Transport adopted 66 suggestions last year or roughly one in every four completed. Total savings amounted to approximately \$20,000 or about \$300 a suggestion.

The suggestion awards supervisor also pointed out that delays in decision occur because each must be "thoroughly investigated" by the service concerned and asked that suggestors "give us a chance to take a good look at your idea."

## sa suggestion lui vaut \$80

M. J. L. G. de Niverville, employé des Services du personnel à Ottawa, a mérité une prime de \$80 pour sa suggestion visant à réduire la paperasse au moment de la paye des employés.

Sa suggestion entraîne l'élimination de nombreuses réquisitions autrefois jugées nécessaires pour compiler la liste de paye.

Elle a été mise en vigueur en mai dernier dans certains services du ministère et il est question d'en étendre l'application aux autres ministères du gouvernement.

**WE'RE LOOKING FOR AN AWARD WINNER**

**NOUS CHERCHONS UNE TÊTE À COURONNER**

**It PAYS!**  
to suggest ideas  
for  
**BETTER**  
work methods.

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dans votre coin à rouspéter?**  
**SUGGÉREZ**  
de nouvelles méthodes  
de travail aujourd'hui même.

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SUGGESTION AWARD PROGRAMME  
DEPARTMENT OF TRANSPORT  
OTTAWA, ONTARIO

Envoyez vos suggestions à:

LE SURVEILLANT  
PROGRAMME DES PRIMES À L'INITIATIVE  
MINISTÈRE DES TRANSPORTS  
OTTAWA, ONT.



it happened in 1968.



**MARINE PAGEANT MARKS ANNIVERSARY**—His Excellency Governor General Roland Michener waves a greeting during the Rideau Canal Marine Pageant held last June 30 to mark Canada's 101st birthday. With the Governor General is Mrs. Michener and former United States Ambassador to Canada and Mrs. W. W. Butterworth. Eighteen craft, including the D.O.T. canal ships "Long Sault" and "Rideau," took part in the pageant.

**POUR MARQUER NOTRE 101<sup>e</sup> ANNIVERSAIRE**—Son Excellence le gouverneur général Roland Michener lève son chapeau en guise de salut au moment du départ d'un défilé de bateaux sur le canal du Rideau, le 30 juin dernier. La cérémonie avait lieu dans le cadre des fêtes marquant le 101<sup>e</sup> anniversaire de la Confédération. En compagnie du gouverneur général et Madame Michener, on remarque l'ancien ambassadeur des États-Unis au Canada et Madame W. W. Butterworth. Dix-huit bateaux et barques ont pris part au défilé, dont deux du ministère des Transports, le "Long Sault" et le "Rideau."



**ANOTHER FIRST**—The first Coast Guard Day held by the St. John's, Newfoundland, Marine Services Base this year drew widespread interest although crowds were reduced because of unfavorable weather. Equipment on display during the event included CCGS Wolfe and CCGS Montmorency.

**JOURNÉE DE LA GARDE CÔTIÈRE**—L'agence de la marine de St. John's (T.-N.) a tenu sa première Journée de la Garde côtière, cette année. En dépit d'un temps pluvieux, une foule assez nombreuse a assisté à l'événement. En plus des diverses aides à la navigation mises en montre, deux navires, le "Wolfe" et le "Montmorency", étaient ouverts aux visiteurs.

## certaines événements de 1968

**VISITOR FROM INDIA**—Gopal Khemani, a 37-year-old engineer, has returned to India after spending six months studying the workings of the department's Air Services Construction Engineering and Architectural Branch. In the photo, Mr. Khemani (at left) confers with Alex Clarke, a draughtsman in the electrical engineering division.

**VISITEUR DE L'INDE**—M. Gopal Khemani, ingénieur âgé de 37 ans, vient de retourner en Inde après avoir passé six mois aux études à la Direction de la construction et de l'architecture des Services de l'Air du ministère des Transports, à Ottawa. On voit ici M. Khemani, à gauche, en train de s'entretenir avec M. Alex Clarke, dessinateur à la division de l'électrotechnique.



**ONE OF THOSE LAZY, HAZY DAYS**—It was a busy day for the kids with all the races and prizes to be won, but for D.O.T. dads, the annual headquarters staff picnic at Vincent Massey Park in Ottawa offered a chance to forget the busy office routine for an afternoon and enjoy the informal company of co-workers. A highlight of the picnic was the presentation of the C.P. Edwards tug-of-war trophy which was won for the second year in a row by a team from the flight services division. The trophy was presented by Don McDougal, executive assistant to the deputy minister.

**AU PIQUE-NIQUE DES EMPLOYÉS**—Les enfants y ont passé une journée agréable, participant aux divers concours organisés par les employés attachés au siège de l'administration à Ottawa. Pour les parents, c'était le moment de la détente dans le magnifique décor du parc Vincent Massey. Le clou de la journée a été la présentation du trophée C. P. Edwards aux gagnants du jeu de souque-à-la-corde. Pour la deuxième année d'affilée, c'est une équipe de la Division des vols qui a remporté ce trophée. La présentation a été faite par M. Don McDougal, adjoint exécutif auprès du sous-ministre.





## two appointments made to personnel branch

Two Ottawa men, Terence C. Porter, 47, and C. M. (Whit) Whitar, 48, have been appointed to new positions with the Personnel Branch at Ottawa headquarters.

Mr. Porter has been appointed Director of Manpower Planning and Organization, while Mr. Whitar has been appointed Director of Classification.

In his new position, Mr. Porter will be concerned with manpower planning and performance evaluation, and the development of policies and procedures to improve overall effectiveness in these areas.

Mr. Porter was previously director of a staffing program for the Public Service Commission. Prior to that, he held a number of senior managerial positions in the Canadian Armed Forces.

Mr. Whitar joins the department from the Bureau of Classification Revision where he has been involved in the classification revision program since its inception and for the past two years has been chief of the conversion division.

He joined the Public Service in 1964 after 26 years in the Canadian Armed Forces where he served in line and staff appointments in Canada and abroad. He is a graduate of both the Canadian Army and the Royal Canadian Air Forces Staff Colleges.

## new director

Dennis R. Hemming, former chief of the research and programming division, Civil Aviation Branch, has been appointed Director of Planning and Research for Air Services.



**OPERATIONS REVIEW DIRECTOR**—*Ernest Meyers, 44, has been appointed Director of Operations Review with the Department of Transport.*

*In his new position, Mr. Meyers will conduct independent reviews of both the adequacy and effectiveness of departmental endeavors in all areas of operations and administration. He will report to the Deputy Minister.*

**UNE ÉTUDE DES SERVICES**—*M. Ernest Meyers, 44 ans, vient d'être nommé directeur d'une étude qui portera sur les services du ministère des Transports au niveau de l'administration et de l'exploitation. Il fera rapport au sous-ministre.*



**SERVICE DES AÉROPORTS**—*M. André Dumas, 44 ans, de Montréal et Trois-Rivières, vient d'assumer ses nouvelles fonctions au poste de chef du Contrôle des opérations des aéroports au ministère.*

*Il s'est vu confier la tâche de coordonner les projets et l'activité au sein de la Direction de l'exploitation des aéroports. Il examinera les méthodes d'exploitation et recommandera les améliorations qui s'imposent.*

**AIRPORTS OPERATIONS**—*André Dumas, 44, of Montreal and Trois-Rivières has assumed his new post as Chief, Airports Operations Review.*

*Mr. Dumas will co-ordinate projects and activities within the Airports and Field Operations Branch of Air Services at headquarters, review the methods of operation and recommend improvements.*

## deux nominations à la direction du personnel

MM. Terence C. Porter, 47 ans, et C. M. (Whit) Whitar, 48 ans, viennent d'être nommés à de nouveaux postes au sein de la Direction du personnel du ministère.

M. Porter devient directeur de la planification et de l'organisation de la main-d'œuvre. Avant cette nomination,

il était responsable d'un programme de dotation de personnel à la Commission de la fonction publique.

M. Whitar, de son côté, est nommé directeur de la classification. Il occupait auparavant un poste au Bureau de la révision de la classification.

# retirements

# à la retraite

## Capitaine Germain Houde

Une personnalité bien connue dans les milieux maritimes de Québec, le capitaine Germain Houde, du service d'inspection des navires à vapeur, vient de prendre sa retraite après avoir consacré près de 50 ans de sa vie aux choses de la mer et de la navigation en général.

En 1935, il agissait comme pilote sur le Saint-Laurent entre Montréal, Kingston et Ottawa. Il occupa ce poste jusqu'au début de la seconde guerre mondiale alors qu'il passa en haute mer dans les rangs de la Marine canadienne à titre de lieutenant.

Immédiatement après la guerre, il assumait, pour le compte du ministère, la direction de la station de pilotage de Pointe-au-Père, emploi qu'il dû abandonner à cause de surdité progressive résultant d'une blessure subie durant la guerre. C'est alors qu'il passa au service d'inspection des navires à vapeur comme inspecteur d'équipement.

"Papa Houde", comme se plaisaient à l'appeler ses confrères de travail, a été le héros d'une magnifique fête en son honneur lors de sa dernière journée de travail, le 14 juin dernier. A Mme Houde on a présenté une gerbe de roses et au héros de la fête un fusil de chasse à double canon. Pour accompagner le cadeau, on a remis à M. Houde un petit contenant bien spécial qui servira à garder chaud ou froid, selon les goûts du chasseur, le breuvage si désaltérant au moment de la "pause qui rafraîchit".

Quels sont ses projets d'avenir? Il voyagera un peu, s'adonnera à ses passe-temps favoris, la chasse et la pêche, et consacrera la plus grande partie de son temps à sa famille, surtout auprès de ses six petits-enfants.

Captain Germain Houde, inspector of ships equipment at Quebec, has retired from the Department of Transport after serving most of his life as a sea-going man.

A high point of his career was his appointment as a pilot in the St. Lawrence-Kingston-Ottawa area in 1935.

Following service at sea during the Second World War, and a term as superintendent of pilots at Father Point, he joined the Steamship Inspection Service of the D.O.T. where he remained until his retirement.



*De gauche à droite, Mme Houde, le capitaine Germain Houde et M. L. Casey, responsable du service d'inspection des navires à vapeur à Québec.*

*Captain and Mrs. Germain Houde and L. Casey, senior steamship inspector at Quebec.*

## Allin W. Jackson

Allin W. Jackson, a forestry meteorologist who has been with the department since 1940, has retired in Vancouver.

Eighty friends, colleagues and associates said goodbye to Al and his wife, Helen, at a lively dinner party in the Fraser Arms Hotel.

After an early career as a teacher in B.C. high schools, he joined the Met. Branch as a forecaster at Edmonton, then was transferred to Vancouver in 1952.

Tributes to the retired meteorologist included messages from former pupils at

Kamloops High School, some of whom later followed him into meteorology, from teaching colleagues, from friends within the branch, and from the burly "loggers" with whom he worked.

Guests at the dinner included Allan McCauley, retired regional meteorologist, Tony Douglas, manager of the B.C. Council of Forest Industries who thanked Allin on behalf of the logging industry, Regional Meteorologist John Knox and RDAS and Mrs. J. A. Lenahan.

A surprise guest at the affair, which was organized by Jack Mathieson, was Mr. Jackson's elder son Ian, an Air Canada captain based in Montreal.



**LAST DAY ON THE JOB**—Andrew MacClements, chief of ship repairs, has retired from Marine Services after 20 years with the Department of Transport. Mr. MacClements and his wife were guests at a small reception held for them by friends and colleagues that included J. R. Strang, director of the Shipbuilding Branch.

## C. C. Foster

C. C. ("Cece") Foster has retired from the Department of Transport after 38 years of service.

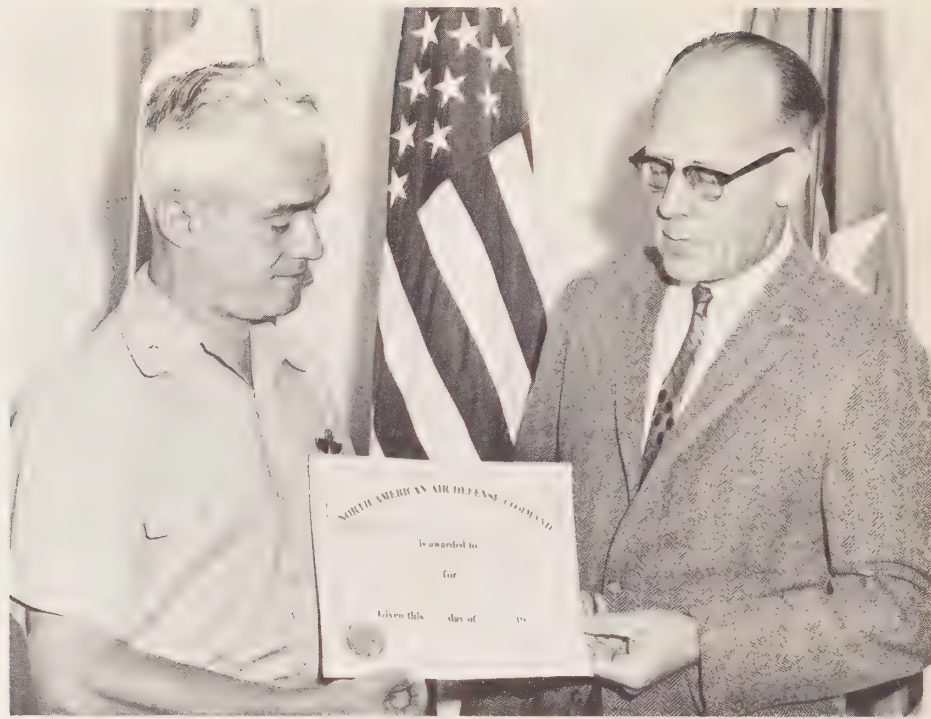
Mr. Foster, who retired as an inspector of radio regulations at Moncton, served as a radio operator at various locations in the Maritime provinces, Quebec and the Northwest Territories during his lengthy career.



*Mr. and Mrs. Jackson.*



# TRANS-CANADA



## Meteorologist Receives NORAD Award

*Toronto*—A. D. Dow, a meteorological officer with the Met. Branch, has returned to civilian employment in Canada after three years of service as a Canadian Forces commissioned officer on exchange duty with the United States Air Force.

On July 22, Mr. Dow was presented with the NORAD Certificate of Achievement by Brigadier-General R. B. Hughes, Vice-Commander, NORAD Region. The citation read in part:

"This certificate is awarded to Major Alvin D. Dow for outstanding and commendable performance of duty while serving as Chief, Current Operations Branch, Staff Weather Agency, Headquarters, North American Air Defence Command, from 4 July 1965 to 31 May 1968.

"During this period, he displayed exceptional professional ability, leadership and outstanding judgment in the performance of his duties. His outstanding initiative and resourcefulness resulted in significant contributions to the air defense of the North American Continent.

"Throughout his assignment, he maintained an objective and unprejudiced attitude in the interservice and international aspects of this command. His consistent outstanding performance of duty provided a unique contribution to this headquarters and reflects great credit upon himself, the North American Air Defence Command, and the Canadian Armed Forces."

The certificate was signed by P. H. Greasley, Major General, United States Air Forces, Acting Chief of Staff.

*Brigadier-General R. B. Hughes, U.S.A.F., (left), presents the NORAD Certificate of Achievement to A. D. Dow, Met. Branch.*

## Nouveaux noms aux régions

*Ottawa*—Les six bureaux régionaux des services de l'Air du ministère des Transports, nommés jusqu'à maintenant d'après les villes où ils sont situés, auront dorénavant des appellations donnant une meilleure idée des parties du Canada qu'elles englobent.

Ainsi, l'ancienne région de Moncton devient la région Atlantique des services de l'Air; celle de Montréal devient la région de Québec; celle de Toronto, la région de l'Ontario; celle de Winnipeg, la région Centrale; celle d'Edmonton, la région Ouest; et celle de Vancouver, la région du Pacifique.

## Regions Renamed

*Ottawa*—The Department of Transport's six operating Air Services regions, named in the past after the cities in which their headquarters are located, have been given new titles more descriptive of the areas of Canada they encompass.

The former Moncton Region now becomes Atlantic Air Services Region; Montreal Region becomes Quebec Air Services Region; the former Toronto Region is Ontario Region; former Winnipeg Region is Central Region; Edmonton Region becomes Western Region, and Vancouver Region is renamed Pacific Region.

**MÉTÉOROLOGISTE HONORÉ**—Un météorologiste des Transports, M. Alvin D. Dow, qui vient de compléter trois ans de service avec l'Aviation américaine dans le cadre d'un programme canado-américain d'échange de personnel, s'est fait décerner un certificat de mérite de NORAD. Pendant son séjour aux États-Unis, M. Dow, à titre de chef de service, était attaché au quartier général du Commandement de la défense aérienne du continent nord-américain. Le certificat, décerné en reconnaissance des précieux services rendus à NORAD, a été présenté à M. Dow, à droite, par le brigadier général R. B. Hughes de l'Aviation américaine.

## Into Each Life . . .

*Toronto*—Despite their best efforts, the Met. branch's annual Weathermen's Golf Day had to be postponed because of bad weather.

Undaunted, however, the weathermen re-scheduled the event and with the help of warm, sunny weather and 100 enthusiastic participants, made it an unqualified success.

Winner of the cup donated by Met. Director J. R. H. Noble as first prize was Linda Plaskett of the research and training division.

Linda was presented with the award by Ted Wiacek, officer in charge of the weather office at Toronto International Airport.

After a gruelling day on the links, the golfers retired for a social period of celebration and commiseration where, it was reported, many of them are alleged to have turned in better performances than they did on the fairways.

"À LA MODERNE"—C'est ainsi, de nos jours, qu'on installe certains phares le long de nos cours d'eau. Celui-ci est fait de fibres de verre et on l'a transporté par hélicoptère jusqu'à son emplacement sur l'île Lennard, en Colombie-Britannique, sur la côte ouest de l'île de Vancouver. On voit ici la tour du phare suspendue au-dessus de la base de ciment qui lui servira d'appui.

The "flying" lighthouse nears its new home at Lennard Island.

## The Flying Lighthouse

*Lennard Island, B.C.*—Despite a runaway plane, fog, and a man-made gale, this island's "flying" lighthouse is now solidly in position, sending its powerful beacon out over the Pacific Ocean from this outpost on Vancouver Island's rugged west coast.

Trouble began when the fibreglass lighthouse, awaiting shipment at Tofino Airport, was struck by a private plane that skidded out of control while landing. Damage was slight.

On the day set for its installation, fog set in after a helicopter and a 13-man crew had been brought out from Victoria.

The next day, the tower was flown out to the site beneath the "chopper," which was forced to use full power while hovering because of a lack of wind.

Crouched on the concrete pad that was its base, the men were buffeted by a heavy downdraft from the craft's propeller as they struggled with guide ropes linking the hovering tower base with a waiting circle of bolts.

With the installation of the tower and the heavy light atop it, the crew turned their attention to dismantling the old wooden lighthouse, a task, said one man, "much simpler than installing its replacement."

## Former Lightkeeper Dies at 105

*Parry Sound*—Adam Morrison Brown, a D.O.T. lightkeeper for more than 40 years and the oldest member of the Masonic order in North America, has died in Parry Sound at the age of 105.

Born at Holstein, Ont., on Dec. 17, 1862, Mr. Brown became a lightkeeper with the department in the eighteen-nineties. He retired in 1937.

During his career, he maintained the Red Rock lighthouses that guarded the approaches to Parry Sound.

## Ideas Pay

*Calgary*—Ralph E. Moyer, an electronics technician at Calgary, has been presented with a \$385 suggestion award which he earned while serving as a warrant officer in the Canadian Forces.

The award was presented to Mr. Moyer, who has since joined D.O.T., by L. G. Potvin, regional maintenance and operations superintendent, along with congratulations from E. G. Lundrigan, area maintenance supervisor, and R. R. Travers, telecommunications area manager.

Mr. Moyer's suggestion involved a modification to the UHF Intercom System of T-33 jet aircraft.

"We are very pleased to welcome a man of your calibre into the Department of Transport," said Mr. Potvin, noting that Mr. Moyer has received about a dozen awards for suggestions while in the Canadian Forces.

## Bad Timing

At some formerly isolated West Coast lightstations, life has become almost suburban. New fully modern staff dwellings have all facilities for comfort and convenience. Even television is possible, though reception is of variable quality.

Last December, a D.O.T. Santa Claus made a tour, via Canadian Coast Guard helicopter, of the stations out from Victoria, B.C.

Afterward, a visitor said to one child: "I suppose you were pretty excited to see Santa come by helicopter?"

"Yeah, but he came right in the middle of a keen cartoon," she replied.

## Au bénéfice de la navigation internationale

*Ottawa*—Sept employés du ministère ont complété en juin dernier une tournée d'un mois dans le Nord canadien où ils ont étudié sur place le fonctionnement du système Omega de navigation à très longue portée utilisé par l'aviation et la marine de nombreux pays.

Cette étude, effectuée jusqu'à Alert, à l'extrémité nord de l'île Ellesmere, avait pour but d'apporter des corrections au système de façon à accroître l'exactitude des déterminations de position qu'il fournit à l'aviation et à la marine.

Au cours de l'été de 1967, une étude semblable avait été effectuée par une équipe à bord du brise-glace Labrador durant sa croisière annuelle dans l'Arctique.

Au cours de son excursion, cette année, le groupe a fait escale à onze postes et stations météorologiques de l'Arctique.

M. F. W. Adams, qui était chargé du projet, et M. J. B. McLaughlin ont pris des lectures scientifiques pendant une période de 30 heures à chaque endroit pour déterminer les corrections à apporter au système. Le capitaine Gerald L. MacInnis, le co-pilote Jack Thorpe, les mécaniciens de vol Weston Fredericks et Alphonse Saldana, et M. E. L. Barclay, de la Direction de la météorologie, tous d'Ottawa, faisaient également partie de l'expédition.





Transport  
**ALBUM**  
des Transports



*An Air Traffic  
Controller at work  
in the Radar Room at  
Vancouver International Airport.*

*Contrôleur de  
la circulation aérienne  
à l'oeuvre dans la salle de  
radar de l'aérogare de Vancouver.*

# TRANSPORT

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# CANADA





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Editor *Bryan R. Goodyer*

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CONTROLLER OF STATIONERY, OTTAWA, 1969

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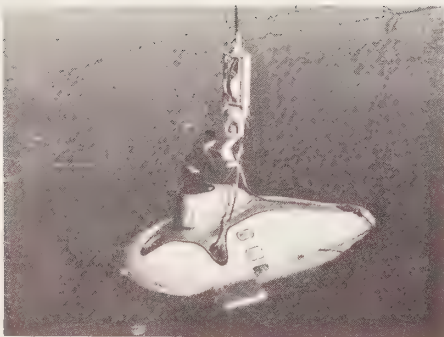
Rédacteur français *Edouard Deslauriers*

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CONTRÔLEUR DE LA PAPETERIE, OTTAWA 1969



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The story of the two-man research submarine *Pisces* (shown disconnecting from a crane aboard CCGS *Labrador* prior to making a dive in Arctic water south of Melville Island) and its assistance in the successful completion of "Project R.I.P." is told by Captain Paul Tooke, master of the *Labrador*. The story begins on page 4.

Le "*Pisces*", petit sous-marin capable de contenir seulement deux personnes, s'est prêté à d'importantes recherches scientifiques dans l'Arctique, l'été dernier. Le capitaine Paul Tooke, du n.g.c.c. *Labrador*, raconte en page 4 comment le "*Pisces*" s'est comporté au cours de sa périlleuse mission dans les profondeurs des eaux de l'Arctique au sud de l'île Melville. Dans cette photo, le sous-marin est descendu à l'eau à l'aide d'une grue installée à bord du *Labrador*.

Our new Deputy Ministers, O.G. Stoner, will assume his new duties with the Department of Transport on Feb. 1. Mr. Stoner succeeds J.R. Baldwin, who has become president of Air Canada. Full details of Mr. Stoner's biography will appear in the next issue of *TRANSPORT*.

Notre nouveau sous-ministre, M. O. G. Stoner, assumera ses nouvelles fonctions aux Transports d'ici quelques jours. On sait qu'il succède à ce poste à M. J. R. Baldwin, devenu président d'Air Canada. On publiera une biographie détaillée du nouveau sous-ministre dans le prochain numéro de notre revue.

Our thanks to Jean Miville-Deschenes, an artist on the staff of the Department of Public Printing and Stationery in Hull, whose design for the cover of the November-December 1968 issue of *TRANSPORT* sparked a number of inquiries from the readers.

Nos remerciements à l'artiste Jean Miville-Deschênes, du Département des impressions et de la papeterie publiques dont le dessin ornant le frontispice de notre numéro de novembre-décembre a suscité l'admiration de nos lecteurs.

The Editors

La rédaction



## A NEW ROLE

I am starting my twentieth year of full time activity in transportation in a new role at Air Canada. While not in the Department of Transport, it will be under the Minister of Transport, so quite a few of the associations and contacts of recent years will remain. To all of you in the Department who have, as far as I am concerned, made this the most stimulating and vigorous department of government, and who have helped me so much in the last fifteen years, I send my thanks and best wishes for the future.

## NOUVEAU POSTE

Je commence ma vingtième année d'activité à temps complet dans le domaine des transports avec un nouveau poste à Air Canada. Bien que je ne serai plus au ministère des Transports, je relèverai quand même du ministre des Transports et, de la sorte, je conserverai nombre de mes liens et contacts des dernières années. A tous ceux d'entre vous qui, au ministère, ont fait en sorte qu'il soit pour moi le ministère du gouvernement le plus exaltant et le plus dynamique, et qui m'ont tant aidé ces quinze dernières années, j'adresse mes remerciements et mes meilleurs vœux pour l'avenir.

*Deputy Minister*

*Sous-ministre*



# the long, cold summer

by Captain Paul Tooke



Capt. Tooke

*CCGS Labrador was involved in three "first-ever" exercises during the annual Arctic resupply operation which concluded last fall. These were the successful recovery of four one-ton recording instruments from the Arctic sea bottom, the use of a research mini-submarine in ice-covered seas, and the tape-recording of the underwater noises of Arctic ocean mammals.*

*This article, except for some paragraphs of explanation, is a compilation of the reports of Captain Paul Tooke, master of the Labrador.*

The icebreaker CCGS Labrador set out July 17, with a total of 114 souls, for a three-month voyage in Canada's Arctic. Though she had a varied number of assignments, one of the most important

was the "R.I.P." project.

The term "R.I.P." has no deadly connotation. It refers to the attempted recovery of five one-ton remote instrument packages, or R.I.P. units, from the sea-floor of the Arctic archipelago, where they had been lowered and placed the year before.

The packages were designed to record samples of undersea noise once each hour for a year. Each unit was lowered to the bottom in different Arctic channels in order to typify under-sea noise for use in the future design of sonar detection and acoustic navigational devices.

The method of RIP recovery was to send coded underwater sound signals from the icebreaker into the water near the location of the instrument. When these sounds were recognized by the release system in the RIP unit, an explosive bolt fractured and released an underwater float. As it rose to the surface, the float unreeling a rope which was used to hoist the RIP unit onto the ship.

It also ejected automatically copious quantities of a yellow-green dye and switched on a small radio transmitter.

The two-man submarine *Pisces* was flown from Vancouver to Thule, Greenland, where it was picked up by the Labrador for assistance in recovering the RIP units and conducting underwater research.

The RIP recovery project was 80 per cent successful, four out of five being recovered. RIP Number Two, off Thule in open water, was not recovered because a 176-foot-high iceberg had grounded exactly on its position. It was estimated by the scientists aboard the Labrador to contain 50 million tons of ice.

It had been intended to investigate

this site on the sea floor (235 fathoms) but I stopped the operation because of the slow oscillations of the iceberg and the danger of it overturning because of its obvious loss of stability due to grounding.

We abandoned this unit and moved on to Norwegian Bay which was solidly covered with ice three feet thick. The Labrador spent six hours breaking up all the ice in a quarter-mile circle into small floes. When the RIP was challenged by the sound-signals from the quarter-deck, the float could not be seen. From the ship's helicopter, the dye was detected streaming up in the water between the cracked floes. The ship then split the small floe, thus permitting the float to be picked up and the rope from the RIP to be wrapped onto the winch drum.

The same procedure was repeated at RIP Position Number Five to the west of Cornwallis Island and the one off Winter Harbour, Melville Island.

RIP Number One off North Devon Island was an open water recovery, and no problems were experienced other than the usual one of very delicate shiphandling lest the rope or wire be snapped by the weight of the ship or the turning propellers.

Health of the crew became of special importance through the death of the ship's medical officer, Dr. John Goodwin, who suffered a heart attack approximately two weeks after sailing. He had diagnosed a case of appendicitis shortly before his death which necessitated a dash from Wakem Bay to Sugluk, in Hudson Strait, where the patient was transferred to CCGS C.D. Howe for a successful operation.

Another seaman suffered severe head

injuries in a fall but the ship, fortunately, was at Thule where hospital attention was immediately available.

Crew morale during the trip was maintained at a fairly high level. I judge this on the fact that no complaints were made to the master during the entire trip, either directly or through department heads, and also by the roars of laughter I heard floating up through the messrooms to my quarters. "If they're laughing, they're not plotting", as one master imparted to me many years ago.

The films supplied were invaluable to the general relaxation and mental escape, however, fleeting, from the stark realities of the Arctic, and were much appreciated by all on board.

Physical recreation was difficult, but we did manage to land many of the crew at Sugluk to play baseball and kick a football around for a few hours. Also, in Milne Inlet, all the fishermen were flown ashore to partake in a fantastic run of Arctic char, a native trout. Good success was had, 50 to 60 fish being caught, some of them nearly a yard long. This was strictly rod and line and lure fishing, but proved to be a highlight of the voyage.

The "Pisces" made a total of 20 dives. It was picked up each time by maneuvering *Labrador* alongside, while the operator opened the hatch and hooked on our crane hook. This operation calls for absolutely no movement of *Labrador*, otherwise the submarine would start "pendulumming" about in ever-increasing gyrations.

I was always worried that though it was calm when *Pisces* submerged, it might be quite nasty when it surfaced three hours later. With its low hatch, about a two-foot sea would slop in the hatchway, preventing it from being opened to hook on. With *Labrador* rolling even slightly, recovering *Pisces* without damage would be impossible.

Two or three times we lost radio contact with *Pisces* on the ocean floor, and therefore had no idea where she was.

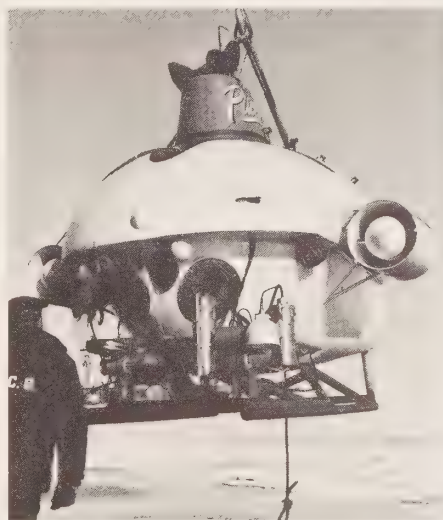
Several times off Melville Island, I watched large ice floes moving into the area after *Pisces* had gone down earlier in open water for miles around. Luckily she came up between the floes and we spotted her despite the fact her two-foot-high hatch is hard to see over half a mile. Usually, if ice was around, a rope was attached to the submarine.

One real danger decided between Al Trice, operator and part owner of *Pisces*, and myself was that if the lead weights had to be jettisoned on account of malfunction on the sea-bed, *Pisces* might shoot to the surface under the middle of an ice floe, and buoyancy would keep her hatch jammed hard up against the under side, where she could be invisible to us forever.



*CCGS Labrador, which steamed 12,724 miles in 89 days during last summer's annual Arctic resupply operation.*

*Le n.g.c.c. Labrador, au cours de son dernier périple dans les eaux de l'Arctique, a parcouru 12,724 milles en 89 jours.*



*The two-man submarine Pisces is hoisted aboard the Labrador after diving under the ice off Melville Island. Pilot "Scratch" MacDonald can be seen emerging from the sub's hatch.*

*Le petit sous-marin «Pisces» est hissé à bord du Labrador après une de ses plongées sous la glace à quelques milles de l'île Melville.*



*The Pisces submerges in Norwegian Bay.*

*Le «Pisces» sur le point de disparaître sous l'onde dans la Baie Norvégienne.*



In his report, Dr. Allen R. Milne of Victoria, chief scientist aboard, writes: "The unevenly-lit under-ice world of the seal could be seen through the view ports of *Pisces* and on the television screen during under-ice acoustic measurements. The water was often transparent enough to permit viewing by natural light to depths as great as 650 feet. At one RIP site near Melville Island, after the float had reached the surface, we followed the rope down 1,000 feet to the sea floor to photograph the instrument as it sat during its year's vigil."

Dr. Carleton, of Johns Hopkins University, said his biggest goal was to tape-record the underwater noises of the narwhal, a sea mammal on which he waxed enthusiastic at the slightest provocation.

I dodged into Grise Fiord on the way out of Jones Sound and anchored a stone's throw off the beach in dense fog where, predictably, it cleared up as soon as we anchored and inquiries revealed that a large herd of narwhal had indeed that very day passed up the fiord.

Dr. Ray's enthusiasm was catching, and I went in the helicopter with him about 15 miles to the head of Grise Fiord.

We saw nothing on the way up, but as soon as we put the hydrophone in the water at the beach edge, we heard peculiar clicks and whistles in the earphones. He taped these noises for about 10 minutes, then we looked out over the water and there were narwhal everywhere, leaping and slicing around. From the helicopter, we counted between 50 and 60. He obtained movies of them, as well as colour and black and white, being festooned with loaded cameras. He informed us that this was a scientific "first" in the world of mammalogy, and rejoiced at his good fortune in capturing it for posterity, and the enlightenment of this hitherto dark corner of science.

Dr. Ray left us in Resolute Bay, leaving his assistant, Ray Harmon, to carry on the good work, and to record in particular anything he could get on the Ringed Seal. Along the south coast of North Devon Island, Mr. Harmon taped and photographed not only the Ringed Seal, but a rookery of 200 walrus in Stratton Inlet, and a herd of belugas off the entrance.

Dr. Bernard Pelletier, geologist from Bedford Institute in Dartmouth, also got

as much flying time as possible, examining rock stratas and formations. He also was very enthused about his trips to the ocean floor in the *Pisces*, which had the capacity for picking rocks up and depositing them in a bucket, until the \$50,000 stainless steel arm unluckily fell off one day in 100 fathoms.

Dr. Pelletier's enthusiasm for *Pisces* was dampened when it sprang a leak in 100 fathoms, and no time was lost in surfacing. This happened three times before the problem was solved.

The problem had to do with a new rubber flange or gasket where the power cable goes through the hull and out to the motors. The general opinion was that the cold water made the rubber more brittle and less malleable, and it didn't quite do the job of keeping out the ocean.

However, Dr. Pelletier did acquire a couple of crates of rock samples and fossils-in-rock which, if I may quote his own words, were "beautiful, just beautiful."

Dr. Dick Herlinveaux, Fisheries Research Board, Nanaimo, B.C., obtained data from 32 oceanographic stations taken along our route from Thule to Norwegian Bay to Winter Harbour and Eclipse Sound, Milne Inlet, Pond Inlet and back to Thule. As well as Nansen bottle water samples, there was bathythermograph and occasional bottom-coring at these stations. He was also supplied by us with chart tracings of our set and drift every time we stopped. He expressed his satisfaction for the work he accomplished.

Back at Sugluk we embarked two topographers of the Department of Energy, Mines and Resources. Topographical work was carried out on Coates, Mansel and Nottingham islands, the latter being interrupted by a search and rescue mission than involved taking a sick Eskimo girl and the officer in charge of Nottingham Radio to Cape Dorset nursing station. Bad weather held up the Nottingham survey work with fog and heavy rolling preventing the helicopters from flying. This project included the task of measuring distances from mountain to mountain, and establishing mountain heights. It was finally abandoned due to fog and we proceeded to Diggs Island, where snow cover prevented any work and the project was discontinued.

Cleared for the voyage home, we started for Halifax on four engines, at 14 knots, instead of two engines, to avoid Thanksgiving Day at sea, as the extra fuel cost was only about 25 per cent of statutory holiday pay for all hands.

After landing 12 cadets at Sydney, we reached Dartmouth October 13, to officially end the voyage. *Labrador* had steamed a total of 12,724 miles, and the voyage lasted 89 days, or 1,261 hours, 15 minutes.



An R.I.P. unit recovered from the bottom of Viscount Melville Sound. This unit flipped over and was nearly lost because of the interference of a large polar floe which persisted in pressing the Labrador away from its position. This R.I.P. unit is now back at the Defence Research Establishment Pacific where it has produced some excellent records of underwater noises.

*Cet appareil servant à enregistrer des bruits sous-marins a été décelé à l'aide du «Pisces» et ensuite retiré des profondeurs au sud de l'île Melville. On a éprouvé beaucoup de difficultés à récupérer l'appareil, placé à cet endroit l'année précédente; à cause de la présence d'une immense banquise mettant entrave au travail du Labrador.*

(Photos courtesy Defence Research Establishment Pacific, Victoria, B.C.)

# le bilinguisme aux transports

Le ministère des Transports fut l'un des premiers à instituer un programme visant à créer un climat plus favorable à l'expansion du bilinguisme au sein de son personnel et il demeure aujourd'hui l'un des plus actifs dans ce domaine.

Déjà avant l'adoption d'une politique gouvernementale favorisant le bilinguisme dans certains secteurs de la fonction publique, le ministère des Transports, répondant aux désirs de son sous-ministre, M. J. R. Baldwin, maintenant président d'Air Canada, lui-même bilingue, avait déjà jeté les bases d'un programme en ce sens par diverses mesures d'administration interne. En 1965, un comité consultatif en matière de bilinguisme fut établi sous la direction du sous-ministre adjoint à la Direction générale, M. Gilles Sicotte, et, la même année, on retenait les services d'un conseiller spécial en bilinguisme, M. Paul Chouinard, professeur de langues et de méthodologie détenant divers diplômes universitaires, dont, entre autres, une maîtrise en littérature anglaise de l'Université de Montréal.

C'est encore à cette époque, avant qu'on ait officiellement adopté une ligne de conduite gouvernementale bien définie en ce qui concerne le bilinguisme, que le ministère obtenait l'autorisation d'établir sa propre école des langues, une des premières dans la fonction publique.

Quelque temps auparavant, le sous-ministre, avant même l'intervention du Bureau fédéral des traductions, avait invité notre personnel à maintes reprises à utiliser au maximum son potentiel bilingue afin d'avoir le moins souvent possible besoin de recourir aux services de la traduction. Sur ce point, on a également encouragé les employés du ministère à utiliser la langue de leur choix dans tout échange de correspondances à l'intérieur des services.

Aujourd'hui encore, le ministère des Transports demeure celui qui a le plus recours aux services de l'enseignement des langues dans la région d'Ottawa, comme d'ailleurs dans les autres secteurs du pays où l'usage des deux langues est requis.

## Dans des postes-clés

Au chapitre du recrutement, la liste de Canadiens d'expression française détenant des postes-clés au sein de l'administration du ministère et des agences relevant du ministère est assez longue. De fait, on les retrouve dans tous les services et à divers échelons de l'administration.

Pour les besoins de la cause, nommons-en quelques-uns. D'abord, parmi nos trois sous-ministres adjoints dont l'un dirige les Services de l'Air et le second les Services de la Marine, le troisième, à la Direction générale, est un Canadien d'expression française, M. Gilles Sicotte.

Des quatre directions relevant des Services de la marine, celle des travaux maritimes est dirigée par un ancien haut fonctionnaire du gouvernement du Québec, M. Walter Manning.

Aux Services de l'Air, le directeur auquel incombe les plus lourdes responsabilités financières est M. Emile Daoust, de la Direction de la construction et de l'architecture. M. Daoust est un ancien employé de la ville de Montréal.

Le contentieux est depuis de longues années sous la direction de Me Jacques Fortier, natif de Hull (P.Q.).

A d'autres échelons supérieurs de l'administration, il y a des nominations plus récentes encore, soit celles de M. André Dumas au poste de chef du Contrôle des opérations des aéroports et de M. Louis Lavoie, directeur du personnel aux Services de la marine.

Il peut être intéressant de noter ici qu'au sein des diverses agences relevant de notre ministère, d'autres compétences du Canada français détiennent des postes de haute importance. Nous pensons, entre autres, au vice-président de la Commission canadienne des transports, Me Pierre Taschereau. Deux des principaux comités de cette Commission sont également dirigés par des Canadiens d'expression française. En effet, le président du Comité de la politique internationale en matière de transport est M. Gérald Morisset, alors que le Comité des transports par véhicules à moteur est dirigé par Me Laval Fortier.

On sait, par ailleurs, que le président de l'Administration de la voie maritime du Saint-Laurent est M. Pierre Camu.

## Relevé des besoins

Revenant au ministère lui-même, le travail que poursuit le service de M. Chouinard est à signaler. Sa première tâche, à titre de conseiller en bilinguisme, a été de faire le relevé des besoins dans tous les coins du pays où le bilinguisme s'imposait. Cette étude a entraîné, en dehors de la région de la Capitale nationale, l'ouverture des premières écoles d'enseignement des langues de la Fonction publique à Cornwall, St. Catharines, Québec, Montréal et Dorval.

Le service du conseiller en bilinguisme se compose aujourd'hui de huit employés à temps complet, attachés au bureau d'Ottawa, ainsi que d'un certain nombre d'employés qui agissent à temps partiel comme agents de liaison auprès des principales installations du ministère réparties à travers le pays.

Le ministère des Transports est, comme l'on sait, une vaste entreprise dont les ramifications s'étendent d'un bout à l'autre du pays. Il a donc fallu visiter chacun de nos bureaux régionaux, rencontrer les chefs de services et interviewer au-delà de 4,000 employés en vue de déterminer les besoins en matière de bilinguisme par tout le pays. Une attention particulière a été portée aux localités suivantes: la région de la Capitale nationale, Québec, Montréal, Dorval, Cornwall, St. Catharines, Toronto, Fredericton, Moncton, Charlottetown et Saint John (N.-B.).

## Immersion favorisée

En ce qui concerne l'enseignement des langues, notre Comité consultatif en matière de bilinguisme a particulièrement insisté sur la nécessité de plonger les candidats dans des cours de deux ou trois semaines de durée dans un entourage et une ambiance totalement anglais ou français, selon le cas. D'après nos spécialistes, cette formule est l'une des plus aptes à fournir au candidat l'occasion



d'améliorer sa connaissance de la langue seconde. On espère, de fait, que cette formule en vienne à supplanter cette autre qui ne prévoit que cinq ou six heures de cours par semaine.

Au total, depuis le début du programme d'enseignement des langues, près de 1,000 employés des Transports ont eu l'occasion de suivre les cours sous une forme ou une autre, soit en immersion (cours de deux ou trois semaines) ou par périodes de cinq ou six heures par semaine. L'an dernier seulement, 102 employés se sont inscrits à des cours de français en soirée à diverses universités au pays.

Ces chiffres ne tiennent pas compte de ces autres employés qu'on a destinés au programme de biculturalisme et de bilinguisme. Il s'agit, dans ce cas, de certains hauts fonctionnaires désignés pour suivre des cours d'un an, soit à l'Université Laval de Québec ou à l'Université de Toronto. L'an dernier, trois employés de langue française ont suivi le cours à Toronto alors qu'un d'expression anglaise s'est inscrit à Québec. Cette année, deux autres candidats ont été choisis; l'un pour Toronto et l'autre pour Laval.

#### Recrutement difficile

Au chapitre du recrutement, particulièrement en ce qui concerne l'embauche du personnel de langue française, on a formé, entre autres, une équipe de spécialistes à Dorval dont la tâche principale est de pourvoir aux besoins des Services de l'Air et de la météorologie en ayant recours aux plus importantes maisons d'enseignement français au pays.

On s'efforce enfin, par tous les moyens possibles, d'assurer les services dans les deux langues dans tous les secteurs de l'administration où le bilinguisme s'impose.

A Sydney, en Nouvelle-Écosse, notre collège de la Garde côtière canadienne prodigue un enseignement bilingue aux futurs officiers de marine. On consacre 800 heures à l'enseignement de la langue seconde durant les quatre années de ce cours. Le premier groupe d'élèves-officiers, tous maintenant capables de maîtriser les deux langues, recevront leur diplôme du Collège cette année et seront immédiatement appelés à servir à bord de nos navires. Certains seront éventuellement promus à des postes-clés au sein de l'administration des Services de la marine du ministère, soit à Ottawa ou ailleurs au pays. Le Collège aura donc servi à former des spécialistes bilingues qui assureront la relève dans un des plus importants services du ministère.

#### Bibliothèques linguistiques

Plus récemment encore, le ministère est devenu le premier à conclure une entente avec la Commission de la fonction publique en vue de l'établissement sur

place, soit dans nos locaux, de bibliothèques linguistiques dotées de magnétophones et servant également de classes et de salles de conférence. Ces installations permettront au personnel de retourner aux sources à l'occasion, de se retremper enfin dans le milieu, afin de conserver la langue seconde acquise et même d'en approfondir la connaissance.

Deux de ces laboratoires seront aménagés à Ottawa—l'un dans l'édifice Hunter et l'autre dans l'édifice temporaire numéro 3—alors que le troisième ira à Toronto. Ces services s'organisent en collaboration étroite avec le Bureau des langues de la Commission de la fonction publique.

Les succès espérés de cette dernière initiative pourraient entraîner l'ouverture de laboratoires semblables dans d'autres centres à mesure que les besoins en matière de bilinguisme se feront sentir.

Le bilinguisme chez nous fait donc des progrès sensibles. Il reste évidemment beaucoup à accomplir et la tâche est parfois lourde, mais les responsables du programme ont confiance de mener à bien leur œuvre.



P. A. Chouinard

*Au moment d'aller sous presse, on apprenait la mort subite de M. Paul Chouinard, âgé de 48 ans, conseiller spécial en bilinguisme aux Transports depuis 1965. Ses nombreux amis au ministère pleurent la perte de celui qui a tant fait pour créer chez nous un climat favorable à l'expansion du bilinguisme à tous les échelons de l'administration. Nos sincères condoléances à la famille éprouvée, et plus particulièrement à son épouse et à ses quatre enfants.*

*As this issue of TRANSPORT went to press, we learned of the sudden death of Paul Chouinard, 48, special adviser on bilingualism to the department since 1965. His numerous friends here will keenly miss a man who has done so much to create a climate favorable to the expansion of bilingualism at all levels of the administration. Our sincere sympathy goes out to Mr. Chouinard's bereaved family, particularly his wife and his four young children.*

## bilingualism and the department of transport

The Department of Transport was one of the first to initiate a program designed to create a climate more favorable to the growth of bilingualism among its staff and today it remains one of the most active in this field.

Even before the adoption of government policy favoring bilingualism in certain sectors of the public service, the Department of Transport, acceding to

the wishes of its Deputy Minister, J. R. Baldwin, now President of Air Canada and himself bilingual, had already laid the foundation for a program along that line through various internal administration measures.

In 1965, a departmental advisory committee on bilingualism was established under the direction of Gilles Sicotte, Assistant Deputy Minister, General, and,

the same year, the services of a special advisor on bilingualism, Paul Chouinard, were retained.

Mr. Chouinard, a former professor of languages and methodology, holds various university degrees, including an M.A. in English literature from the University of Montreal.

Also at that time, before a well-defined government policy on bilingualism had been adopted, the Department was authorized to establish its own language school, one of the first in the public service.

Earlier, even before the Federal Bureau of Translations came into the picture, the Deputy Minister had suggested the D.O.T. personnel make maximum use of the Department's bilingual potential in order to avoid as much as possible the use of translation services.

The employees of the Department were encouraged to use the language of their choice in all exchanges of correspondence within the Department.

### Training Services

Today the Department of Transport makes the best use of the language training services in the Ottawa region, as well as in other areas of the country where the use of both languages is required.

With respect to recruiting, the list of French-speaking Canadians who hold key positions within the administration of the Department and the agencies which come under it is lengthy. In fact, they can be found in all branches and at various levels of the administration.

Among our three assistant deputy ministers, one of whom directs Air Services and the second Marine Services, the third, the assistant deputy minister, general, is a French-speaking Canadian, Gilles Sicotte.

Of the four branches under Marine Services, Marine Works is directed by a former senior official of the Government of Quebec, Walter Manning.

In Air Services, the director who has the heaviest financial responsibilities is Emile Daoust of the Construction Engineering and Architectural Branch. Mr. Daoust is a former employee of the City of Montreal.

The Department's Law Branch has been for many years under the direction of Jacques Fortier, a native of Hull, Quebec.

### Appointments

At other senior levels of the administration, more recent appointments include those of Andre Dumas to the position of Chief of Airports Operations Review, and of Louis Lavoie, Director of Personnel, Marine Services.

It may be of interest to note here that within the various agencies which come under the Minister of Transport, other French-Canadians hold important posi-

tions. They include the vice-president of the Canadian Transport Commission, Pierre Taschereau.

Two of the main committees of that commission are also directed by French-Canadians. In fact, the chairman of the International Transport Policy Committee is Gerald Morisset, while the Motor Vehicle Transport Committee is directed by Laval Fortier.

In addition, the president of the St. Lawrence Seaway Authority is Dr. Pierre Camu.

Mr. Chouinard's first task as advisor on bilingualism was to make a survey of the needs in all parts of the country where bilingualism was imperative. Outside the National Capital region, that survey resulted in the opening of the first language training schools of the public service at Cornwall, St. Catharines, Quebec, Montreal and Dorval.

The bilingualism unit is now made up of eight full time employees attached to the Ottawa office, as well as a number of employees who act part time as liaison officers with the main facilities of the Department throughout the country.

Because of the size of the Department, it was necessary for Mr. Chouinard to visit each of our regional offices, to meet with the chiefs of services and to interview over 4,000 employees in order to determine the needs for bilingualism across the country. Particular attention was given to the National Capital region, Quebec, Montreal, Dorval, Cornwall, St. Catharines, Toronto, Fredericton, Moncton, Charlottetown and Saint John, N.B.

### Total Immersion

With regard to language training, the advisory committee on bilingualism insisted particularly on the necessity for two or three week "total immersion" courses in a completely English or French environment as the case might be.

According to the specialists, that formula is one of the most likely to give the candidate an opportunity for improving his knowledge of the second language. The committee hopes that the formula will eventually replace the one which provides for only five or six hours training per week.

Since the beginning of the language training program, about 1,000 Transport employees have had the opportunity to take the courses in one form or another, either through immersion (the two or three week course) or in periods of five or six hours per week. Last year alone, 102 employees enrolled in evening courses in French at the various universities across Canada.

These figures do not take into account those other employees who have been assigned to the program of biculturalism

and bilingualism. This concerns senior officers who were designated to follow one year courses, either at Laval University in Quebec or at the University of Toronto. Last year, three French-speaking employees took the course in Toronto, while one English-speaking employee enrolled at Quebec. This year, two other candidates were selected, one for Toronto and the other for Laval.

For recruiting, particularly French-speaking staff, a team of specialists was formed at Dorval whose principal task was to provide for the needs of Air Services and Meteorology by recruiting from the most important French teaching institutions in the country.

Finally, every effort is being made to provide services in both languages in all sectors of the administration where bilingualism is required.

At Sydney, Nova Scotia, our Canadian Coast Guard College is providing bilingual training for future marine officers; 800 hours are devoted to the teaching of the second language during the four years of that course.

### Bilingual Cadets

The first group of cadets, all now capable of mastering both languages, will receive their diplomas from the college this year and will be called immediately to serve on board Canadian Coast Guard vessels.

Some of them will eventually be promoted to key positions within the administration of Marine Services of the Department, either in Ottawa or elsewhere in the country. The college will, therefore, have succeeded in training bilingual specialists who will provide replacements in one of the most important services of the Department.

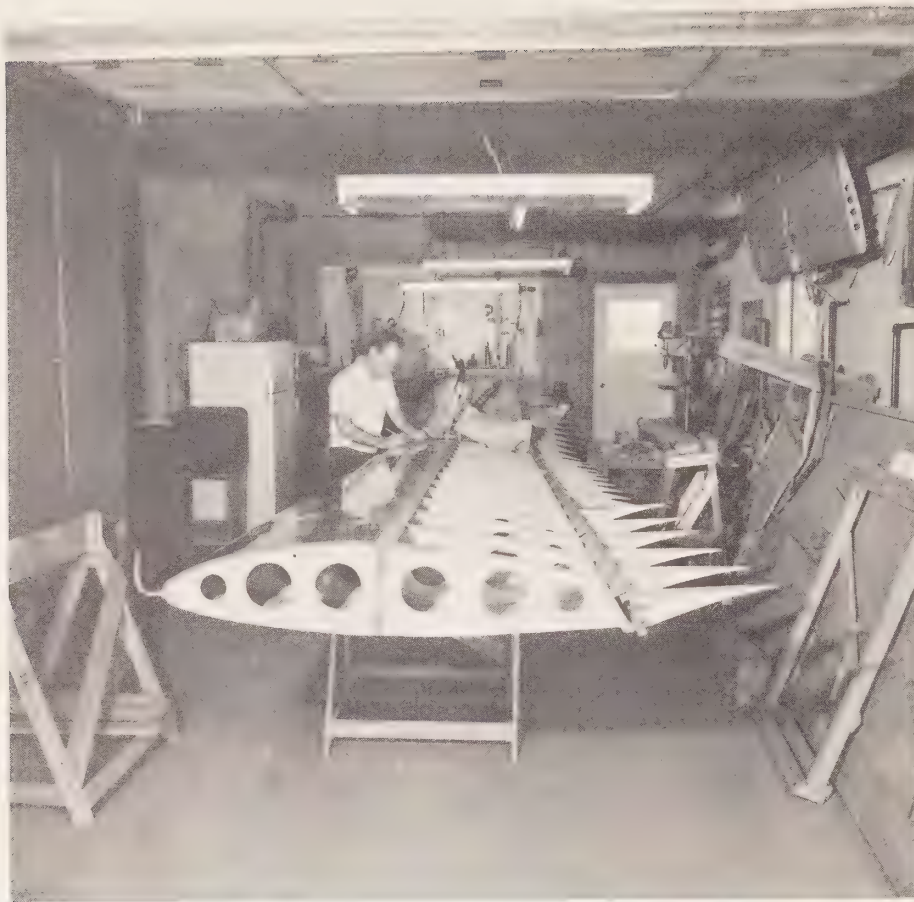
More recently, the Department became the first to conclude an agreement with the Public Service Commission for the establishment of "linguistic libraries" equipped with tape recorders to be used for classes and conference rooms. Such facilities will make it possible for the staff to "brush up" on the second language and improve their knowledge of it.

Two of these laboratories will be set up in Ottawa—one in the Hunter Building and the other in No. 3 Temporary Building—and the third will go to Toronto. These services are being organized in close co-operation with the Language Bureau of the Public Service Commission.

The success of this last initiative could result in the opening of similar laboratories in other centres as the need for bilingualism is felt.

Bilingualism in our Department is, therefore, making substantial progress. Obviously, there is still much to be done and the task is sometimes demanding, but those responsible for the program are confident that they will succeed.





*Jean-Paul Vaillancourt, pencil in hand, works on the plans for a small aircraft that he is building in the garage of his home in Eastview, Ont., a city on the outskirts of Ottawa. Mr. Vaillancourt, whose longtime hobby has been small planes and their construction, is an aeronautical engineer attached to the Quebec air services region in Montreal.*

*Jean-Paul Vaillancourt, crayon à la main, se penche sur les plans qui servent à la construction de son petit avion dans le garage de sa demeure à Eastview. La photo nous fait voir l'aile, dont le recouvrement n'est pas achevé, ainsi que diverses autres pièces accrochées au mur du gaerge converti en atelier.*

## Pour Jean-Paul Vaillancourt, construire un avion est un simple passe-temps

Par Edouard Deslauriers  
Services d'information

Chacun a sa marotte . . . son passe-temps favori, mais aucun de ces passe-temps n'est peut-être aussi exigeant que celui auquel s'adonne présentement Jean-Paul Vaillancourt, employé des Services de l'Air du ministère des Transports dans la région de Québec. Jean-Paul a en effet entrepris la construction d'un avion. Il s'adonne déjà à ce projet depuis près de cinq ans et il n'en prévoit pas l'achèvement avant l'automne prochain.

Chacune des pièces de son avion, depuis la queue jusqu'au nez de l'appareil, a été fabriquée dans un garage au sous-sol de la demeure des Vaillancourt, 270, Cercle Michel, à Eastview. Jean-Paul estime avoir déjà mis environ 4,000 heures à la fabrication des mille et une pièces requises pour constituer et activer les appareils de stabilisation, de direction, de commande, de contrôle et du train d'atterrissage.

Les diverses pièces du fuselage sont déjà construites ainsi que l'aile d'au-delà d'une trentaine de pieds d'envergure. Il

lui reste maintenant à assembler le tout, y incorporer un moteur, et l'appareil sera prêt à décoller pour son premier vol d'essai.

Jean-Paul, âgé de 36 ans, est ingénieur en aéronautique employé au ministère depuis 1957. Il détient aussi son certificat de pilote. Lorsqu'il n'est pas au travail dans son garage, il se ballade donc entre ciel et terre, soit au gré des vents dans un planeur ou bien aux commandes d'un petit avion loué d'un aéroclub. C'est sa façon à lui d'échapper pour un temps aux tracas de la vie quotidienne.

Il était donc naturel, croyons-nous, qu'un pilote, en même temps ingénieur, en vienne à s'adonner à un projet aussi audacieux que celui de construire à son propre compte un avion fait "à ses mesures" et selon ses goûts.

Natif de Maniwaki, à une soixantaine de milles au nord d'Ottawa, Jean-Paul a d'abord commencé à étudier le génie électrique à l'Université d'Ottawa. Puis,

il est passé à l'Université de l'Illinois aux États-Unis où il a décroché son diplôme en génie aéronautique en 1957. La même année, il est employé au ministère des Transports à la Division de la technique aéronautique à Ottawa. En octobre 1967, il est promu surintendant régional à la Division du génie aéronautique, à Montréal, poste qu'il occupe à l'heure actuelle.

C'est au cours de son séjour dans la Capitale que Jean-Paul a décroché son certificat de pilote. Il a plus tard fait partie du club de vol à voile de Buckingham à titre d'instructeur. C'est là qu'il a rencontré Jos Collins, de Gatineau, un autre passionné des choses de l'aviation.

M. Collins est un employé de la CIP de Gatineau. Au début de 1960, il avait entrepris la construction d'un petit avion, modèle Jodel D-11. Jean-Paul, qui avait lui-même depuis déjà longtemps conçu le projet de construire un jour son propre avion et voyant l'occasion d'acquérir une

expérience utile à cette fin, a donc immédiatement offert ses services à Collins, et, en 1963, le Jodel prenait la voie des airs. Ils ont par la suite tous les deux piloté l'appareil pendant trois ans, soit pour un total de 300 heures.

Un an après avoir complété la construction du Jodel, Jean-Paul décide enfin de donner suite à son propre projet. Il choisit comme modèle le Pazmany PL-1, monomoteur à deux places. Jos Collins, quoique fort satisfait de la performance de son Jodel, voit un nouveau défi à relever dans la construction du Pazmany et décide donc de joindre ses efforts à ceux de Jean-Paul. Les deux hommes ne tardent pas à se mettre à la tâche. Au lieu d'un seul Pazmany, ils en construiront deux. Quelques années plus tard, Jos Collins devait vendre son Jodel afin de se procurer les fonds nécessaires pour compléter son deuxième projet.

Ainsi, chaque pièce du Pazmany a été fabriquée en double. Travaillant ensem-

ble, chacun y mettant du sien, soir après soir, en fin de semaine et durant les vacances, on a pu ainsi sensiblement hâter la construction.

"Je me demande si, seul, j'aurais pu tenir le coup", précise Jean-Paul. Un projet comme celui-ci entraîne des heures de travail ardu, méticuleux et soigné. Chaque pièce doit être taillée aux dimensions précises et fabriquée enfin selon les plus hautes normes de sécurité... Aucune marge d'erreur possible. C'est un travail exaspérant où la minutie du détail est de la plus haute importance. C'est enfin à décourager le plus patient des hommes.

Et Mme Vaillancourt, comment s'adapte-t-elle à son rôle de mère et d'épouse d'un mari qui est en même temps pilote, ingénieur et bricoleur? "Je m'intéresse de très près au projet de mon mari, dit-elle. Je me suis habituée au bruit de la machinerie dans le garage, et les enfants de même. J'ai maintenant bien hâte de voir notre petit avion prendre la voie des

airs. Qui sait? ... J'apprendrai peut-être moi-même à piloter l'appareil."

D'ici quelques semaines, la famille Vaillancourt, y compris les trois enfants, Denis, 10 ans, Jocelyne, 8 ans, et Suzanne, 5 ans, déménagera dans une nouvelle demeure à Montréal. C'est là que Jean-Paul assemblera les pièces du fuselage, fixera l'aile à la charpente et installera enfin les divers appareils de commande, y compris le moteur.

Ainsi, Jean-Paul estime que son Pazmany sera vraisemblablement prêt à décoller en septembre prochain. Il aura donc enfin réalisé un rêve qu'il chérissait depuis de nombreuses années. Puis après? ... "J'en construirai peut-être un autre ... à cinq places cette fois, dit-il, afin que les enfants aussi puissent nous accompagner dans nos voyages. Le Canada est un vaste pays, et l'on se propose maintenant de le visiter d'un océan à l'autre ... à bord du Pazmany."



*Mr. Vaillancourt is shown riveting a piece of the cockpit to the wing of the Pazmany PL-1 he is building in his spare time. Each of the parts that go into the construction of the aircraft is made by hand in the small workshop in which it is being assembled.*

*On voit ici Jean-Paul en train de riveter à l'aile une pièce qui servira de dossier au pilote lorsqu'il s'assoiera aux commandes de son avion. Chacune des pièces de l'appareil a été fabriquée à la main dans ce petit atelier. Des milliers de rivets ont servi à l'assemblage de l'aile seulement.*



*The Pazmany PL-1 as it will look when Mr. Vaillancourt completes it, possibly by the fall of 1969.*

*Le Pazmany PL-1 tel qu'il paraîtra lorsque complété.*



# WELCOME TO



The unique control tower atop the new Vancouver International Airport passenger terminal presents a striking silhouette against the sky.

*La tour de contrôle surplombant l'aérogare du nouvel aéroport international de Vancouver renferme un personnel compétent et l'outillage le plus moderne pour assurer la sécurité de la navigation aérienne dans ce coin du pays.*



The main floor of the new passenger terminal at Vancouver looking north shows part of the international flights departure area.

*Cette photo nous fait voir les comptoirs des diverses lignes aériennes dans la salle d'attente réservée aux départs des envolées internationales.*

Friday, October 25, was one of the Red Letter dates on the 1968 calendar for the Department of Transport, for Greater Vancouver and for Canadian aviation.

On that date, Transport Minister Paul Hellyer climbed aboard what was probably the world's most unlikely-looking flying machine and "flew" across the domestic waiting room in the plush new air terminal building at Vancouver International Airport. In so doing, he officially opened one of the world's finest aviation buildings.

The ceremony, witnessed by a festive-spirited crowd of 800 guests, drew a great round of applause when, following speeches by dignitaries of church and state, Mr. Hellyer donned the cap-on-backwards dress of the pre-World War One air pioneers, pulled on his goggles and prepared to "take off" on a symbolic flight from 1910 to the Jet Age. It was a singular tribute to British Columbia's notable record of 58 years of participation in Canadian aviation.

Fittingly, Mr. Hellyer had as his "instructor" the only living Canadian whose flying experience dates back to the days of "those magnificent men and their flying machines", air historian Frank H. Ellis of West Vancouver.

The Transport Department had staged many a colorful event to mark official openings of its air terminal buildings in the past, but in no previous occasion had there been quite the touch of excitement that prevailed at Vancouver.

The Minister was "flying" in a full-scale replica of the "Twin Plane", a strange machine designed, built and flown near Victoria B.C. by the late inventor William Gibson. It was the first flight by a machine entirely produced in Canada and as such won a hitherto little-publicized place in Canadian aviation history. The crowd in the air terminal pressed forward for a better look when Mr. Hellyer, with Frank Ellis at his side, climbed into the seat of the "Twin Plane".

Overall-clad "mechanics", following the custom of the old-time flyers, called "Contact!" The two propellers were given a swing into action and, with special sound effects providing the splutter and



# VANCOUVER

roar of a starting airplane, the machine moved across the floor.

It was unexpectedly dramatic. There was the Minister of Transport opening a \$32,000,000 air terminal embodying aviation's newest-of-everything. Walking beside him, still spry and very much "with it", was seventy-five-year-old Mr. Ellis, wearing the same flying gear he had stored away decades ago. The scene brought to mind other names to be conjured up from British Columbia's pioneer air days: names like William and Winston Templeton, William McMullen, Billy and Olive Star, the Bryants and many more.

The "flight" was short but drew a hearty cheer from the assembly. Mr. Hellyer dismounted and, with Master of Ceremonies J. A. Lenahan, Regional Director of Air Services and Mr. Ellis, was welcomed to the "Jet Age" by Airport Manager Bill Inglis, the Hon. John Nicholson, Lieutenant Governor of British Columbia, and Mayor W. H. Anderson of the Township of Richmond, in which the airport is located. Adding a special scenic touch were eight pretty stewardesses, representing the major airlines operating into Vancouver, each standing on a decorated podium to which was affixed the crest of her airline.

Mayor Anderson presented Mr. Hellyer with a guest book to be used for the recording of names of distinguished visitors to the terminal. The Minister and the participants in the ceremony signed their names on the first page, and Mr. Hellyer declared the building officially open.

Following the signing of the book by the other platform guests, the assembly moved to the trans-border waiting lounge, where refreshments were served. The new terminal was officially in business.

Preparations for the event, and for two special commemorative programs held the day before, had been under way for weeks under the direction of Airport Manager Inglis. Mr. Hellyer, in the course of his address to the crowd, had special words of commendation for the airport staff and regional staff members who assisted them, for both the organization of the two days of formal opening activities



*Transport Minister Paul Hellyer addresses guests and visitors at the official opening of the new Vancouver air terminal on Oct. 25. Seated at front are, left to right, Mrs. William Templeton, widow of the airport's first manager, Mrs. Elizabeth McConachie, mother of the late Grant McConachie, Mr. McConachie's widow and son, William.*

*Le ministre des Transports, M. Paul Hellyer, s'adresse aux invités et visiteurs à l'occasion de la cérémonie marquant l'ouverture officielle de la nouvelle aéroport de Vancouver, le 25 octobre dernier. Assis, de gauche à droite, on aperçoit Mme William Templeton, veuve du premier directeur de l'aéroport; Mme Elizabeth McConachie, mère de feu Grant McConachie, ancien président de C.P. Air; Mme Grant McConachie et son fils William.*



*Mrs. William Templeton, widow of the first airport manager at Vancouver, unveils the memorial at the new international air terminal dedicated to the aviation pioneers.*

*Mme veuve William Templeton dévoile la plaque commémorative érigée dans l'aéroport à la mémoire des pionniers de l'aviation.*



and the smoothness with which the new terminal had gone into physical operation several weeks earlier.

On Thursday, October 24, the Minister acted as master of ceremonies at two events in which tribute was paid to men and women whose names are linked permanently with the history of the airport and with Canadian aviation.

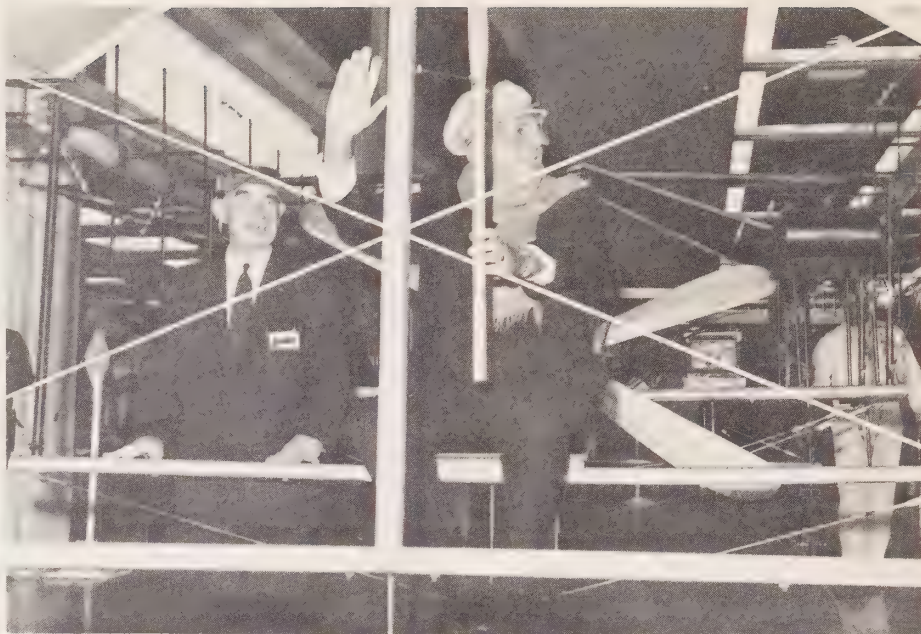
With around 100 specially interested guests in attendance, a ceremony was held in which the new entrance road to the air terminal was named "Grant McConachie Way", in honour of the late president of CP Air, who played a vital part in the development of Canadian aviation, particularly in regard to northwestern Canada.

Deputy Transport Minister John R. Baldwin, now president of Air Canada, and CP Air President J. C. Gilmer spoke briefly in tribute to the renowned aviator. Present for the occasion were Mrs. McConachie, who unveiled a memorial plaque honoring her husband, Mr. McConachie's mother, Mrs. Elizabeth McConachie, and his son William.

Following the ceremony the assembly moved indoors where a large "Wall of Honour" was unveiled in memory of Vancouver's aviation pioneers, the men and women who in the years between 1910 and 1930 were largely responsible for the development of aviation in British Columbia and for Vancouver airport in particular.

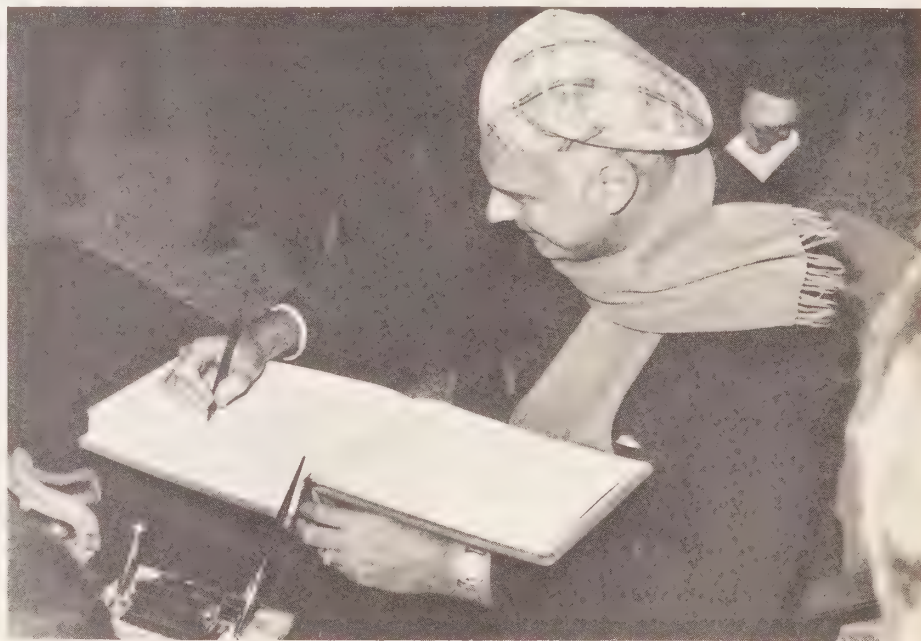
First World War ace and bush pilot Don MacLaren recalled the contribution of those whose names were listed on the memorial. The unveiling was performed by Mrs. William Templeton, widow of the pioneer flyer and first manager of Vancouver airport.

Among the aviation pioneers honored are the late Gordon C. Bulger of Ottawa, the late A. T. Cowley and the late J. H. Tudhope, all former Department of Transport employees. Other D.O.T. employees honored are Joseph Bertalino, Carter Guest, William Jacquot, Norman C. Terry, A. H. (Hal) Wilson, Alf. Walker and H. Davenport.



*Transport Minister Hellyer, right in goggles, scarf and aviator's cap, "takes off" in a symbolic flight that officially opened Vancouver's new air terminal. With him at left is Frank H. Ellis, an air historian and aviation pioneer.*

*Le ministre Hellyer, à droite, portant les lunettes, le foulard et la casquette traditionnelle des pionniers de l'Air, s'installe aux commandes d'une réplique de l'authentique "Twin Plane", premier appareil de fabrication canadienne à prendre la voie des airs près de Victoria (C.-B.) au tournant du siècle. A ses côtés se trouve M. Frank H. Ellis, lui-même un pionnier de l'Air et auteur d'un historique de l'aviation au pays.*



*After declaring the new Vancouver International Airport's passenger terminal officially open, Transport Minister Paul Hellyer signs the airport's visitor's book.*

*Après avoir présidé à l'ouverture officielle de l'aérogare, le ministre Paul Hellyer inscrit son nom dans le livre d'or des visiteurs à l'aéroport.*





Left, Mrs. Elizabeth McConachie, mother of the late G. W. McConachie, and his widow admire the plaque commemorating his memory. At right, Mr. Baldwin delivers his tribute.

## 'He showed me his north, his sky, his Canada'

*A tribute to the late G. W. Grant McConachie, delivered by J. R. Baldwin, former Deputy Minister of Transport and now president of Air Canada, at the ceremony dedicating McConachie Way, the entranceway to the terminal at Vancouver International Airport.*

Today mine is not a role casually sought or lightly borne. A little under two decades ago when aviation became for me an occupation as well as a pre-occupation, a man who came from the east, from the west and from the north met me on my new paths. He showed me his north, his sky and his Canada. His continuing friendship was sometimes nourished by frequent meetings and the welcome even if enforced companionship of long journeys. Sometimes it continued over the span of a continent; always it had much influence on my life and growth. I am not alone. A myriad drew benefit from like contact.

The air and the cloud canyons pay no heed to national boundaries. The air was his stimulus and was his support, yet doubt not that he was a Canadian. Our cities offered him walls of shelter but our open spaces and, more than all, our vast northern grandeurs marked his true ambience and alone could match his vision and enthusiasm.

Love of the open north and love of the mysticism of flight have much in likeness and make the nature that does more than follow change; that nature must, indeed, drag change along by the heels for fear it be too tardy and too slow. Thus he made Whitehorse and Dawson markers on his path to Rome and to Lima; and the man who felt the excitement of his Canada and answered its call to the future became the protagonist of new ideas in the air. He saw no need from fear or caution to shun new fields of flight. Were he here today his talk would be of still more distant horizons, of rockets, of the limitless sky. Always he moved on, yet still he had the time to stand and stare. Always his course must expand:

"South to desert, east to ocean, west to snow. West of these out to seas colder than the Hebrides I must go. Where the fleet of stars is anchored and the young Star-captains glow."

And so we do a little for Grant McConachie today. Fame can be a blinding flash that leaves no sign thereafter; or it can stand on lasting base. His can find its own foundation in his country and those who pass through its skies.

Yet the physical can be a useful jog to memory, and it is little enough we do today to freshen recollection when we join his name to the main path to what was to him always a mere starting point,—the road to an airport and an aircraft.

"He does not die that can  
bequeath  
Some influence to the land  
he knows  
Or dares, persistent, interweath  
Love permanent with the wild  
hedgerows;  
He does not die

His boundary rivers' secret falls  
Perpetuate and repeat his name  
He rides his loud October sky:  
He does not die."



# ASSIGNMENT TORONTO

by Bryan Goodyer  
Information Services Division

*In June, 1967, J. J. R. Cote, a special projects officer with the department, moved his wife, a 15-year-old daughter and a 10-year-old son to Toronto where they were to live for the next 12 months as part of the Government of Canada's bilingual and bicultural program for senior executives. Mr. Cote's impressions on his year spent in Toronto were recorded in the following interview in English.*

Much has been written about the so-called "immersion course" for senior executives which means, for the English-speaking public servant, a year of study in Quebec City.

But what of the French-speaking public servant, who must move his family to Toronto for a year in the Anglo-Saxon capital of the country?

The period between June 1967 and June 1968 was, Mr. Cote says in retrospect, "a year of great events in Canada."

It was the year in which Canada celebrated 100 years of Confederation. It was the year of a federal-provincial conference in Ottawa and of the Confederation of Tomorrow conference in Toronto. It was the year in which Prime Minister Pearson announced his intention to resign. It was also the year that saw the foundation of the Mouvement-Souveraineté Association, the meeting of the Estates General of Quebec and a day in which French President de Gaulle made a memorable speech on the steps of Montreal's city hall.

"All these events allowed us to learn in depth the thoughts of English Canada on problems brought out or raised by French Canada and English Canada," recalls Mr. Cote. "I gained through this a better in-

sight of the Canadian mosaic and have come to realize that Canada is and will be a subject of reason more than a question of cultural affinity because of the differences in its people."

"By co-incidence," he said, "we arrived in Toronto at the time General de Gaulle proclaimed his now-famous "Vive le Quebec libre" declaration. In Toronto, the news media immediately reacted by striking out at him and at those who had promoted his visit to Canada."

"Torontonians in our environment suddenly took a very keen interest in everything that was Quebec or Quebecois as they wished to know all about the intentions of the French president and the Quebec government."

Said Mr. Cote: "If I had to characterize the attitude of the so-called Toronto "WASP" (White Anglo-Saxon Protestant) at this time, I would not have classed him among the traditionally cool and collected but more like the impetuous Latin."

Toronto, Mr. Cote learned during his stay, became the destination after the Second World War of a large number of immigrants.

"There came to be such a great concentration that it now seems that the second language of Toronto is Italian,"

said Mr. Cote.

"Its immigrants adopt the American way of life but they preserve the values and way of life of their respective pasts," said Mr. Cote. "It is in this way that Toronto is internationalizing itself and becoming more lively."

Mr. Cote said he was impressed with Toronto's rapid development, from its busy port to its construction of imaginative new skyscrapers that house new homes, offices, restaurants and entertainment facilities, as well as such unusual collections of paintings, sculpture and art as that at the Royal Ontario Museum.

"Life isn't always pleasant in Toronto, added Mr. Cote, "just as we would have encountered difficulty in Paris if we went to stay there for a year. Life is not a dream but a daily reality."

"For my family and myself, this was a marvellous opportunity and an excellent privilege to have nothing but bilingualism and biculturalism to worry about," concluded Mr. Cote. "This time of reflection and intimate contacts with people made us understand that there are hundreds of questions on which well-meaning and honest people have the right to disagree, as well as the obligation to forgive the divisions and understand."

# ODE TO AN ILS

*While attending a ceremony in the Niagara Peninsula recently, Transport Minister Paul Hellyer was met by a delegation from the Niagara District Airport Commission, which is seeking an Instrument Landing System for its St. Catharines airport. The text of the commission's request and Mr. Hellyer's reply appear below.*



## Niagara District Airport Commission

P.O. BOX 551

ST. CATHARINES, ONTARIO

## THE MINISTER OF TRANSPORT LE MINISTRE DES TRANSPORTS

Ottawa, September 24, 1968

This champagne from the Airport Commission  
Is given for you to drink  
So enjoy it at your leisure  
While of transport problems you think.

So while you're sitting thinking  
And taking the odd "sip"  
An I.L.S. for our station  
Would be very, very "hip".

You'd know the reason for this  
If you'd ever tried to stray  
Into Niagara Airport  
On a foggy, foggy day.

*"The Airport Bard"*

Niagara District Airport Commission,  
P. O. Box 551,  
St. Catharines,  
Ontario.

*Attention of "The Airport Bard"*

Thank you for your poem and the "sparkling wine"  
which I gratefully received on that last trip of mine.

While the champagne you gave me is now all gone  
the strain of your plea still lingers on.

In the circumstances, and with all due respect  
this is just a brief acknowledgment till I can check

On your request for an ILS at your Station  
which I am forwarding to my officials for due consideration.

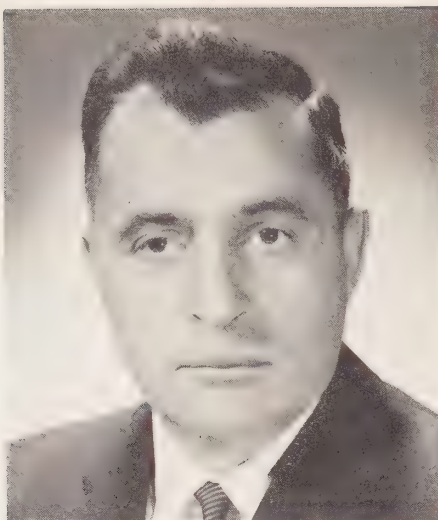
As soon as these experts have completed their reviews  
I'll be writing again to give you the news.

Although I can't predict what the outcome will be,  
I doubt if their reply will be good poetry.

In any case, look forward to an early report  
from Paul T. Hellyer, Minister of Transport.

*Paul T. Hellyer.*





J.-N. Frenette



A. R. Habel

## RÉGION DE QUÉBEC

# Le personnel se déplace

Les études intensifiées ces derniers temps au chapitre de l'aménagement des aéroports, et plus particulièrement en ce qui concerne l'aéroport international de Montréal, ont entraîné certaines permutations du personnel dans les échelons supérieurs de l'administration des Services de l'Air dans la région de Québec.

Ces changements impliquent au moins cinq membres du personnel. Dans certains cas, il s'agit de nominations provisoires à certaines fonctions spéciales. D'autres sont promus et nommés à des postes plus importants au sein de l'administration.

### M. J.-N. Frenette

M. J.-N. (Paul) Frenette, ci-devant surintendant de l'exploitation à l'aéroport international de Montréal, est passé à l'administration centrale des Services de l'Air, à Ottawa, à titre de surintendant des recherches sur les aéroports. Il relève dorénavant de la Direction de l'exploitation des aéroports à la Division de la planification et des recherches. Son travail consiste particulièrement à coordonner les travaux dans le domaine des recherches.

M. Frenette, licencié en sciences agronomiques de l'Université de Montréal et détenteur d'un baccalauréat en génie mécanique de l'Université McGill, est natif de Val David, au Québec. Après ses études, il a travaillé pour un temps avec une firme d'ingénieurs conseils à Montréal avant de passer au ministère des Trans-

ports, en 1959, à titre de surintendant de l'exploitation des aéroports, dans la région de Québec. En 1963, il était nommé surintendant de l'exploitation à l'aéroport de Montréal, poste qu'il occupait au moment de sa nomination à Ottawa.

Marié et père de trois enfants, M. Frenette est un fervent du golfe mais il préfère encore la lecture et l'étude des sciences naturelles. Il fait également partie de diverses associations à caractère professionnel, dont, entre autres, la Corporation des agronomes du Québec, l'Institut professionnel du service public et la Corporation des ingénieurs du Québec.

### M. A. R. Habel

M. Antoine Roland Habel, qui était directeur de l'aéroport de l'Ancienne Lorette, à Québec, depuis 1965, succède à M. Frenette comme surintendant de l'exploitation à l'aéroport international de Montréal.

Natif de Neuville, près de Québec, M. Habel est un ancien pilote de guerre. Après le dernier conflit mondial, il s'est établi à Kapuskasing où il a inauguré son propre service de l'Air desservant l'Ontario Nord.

De 1950 à 1957, il était officier instructeur avec l'ARC. Il a également été instructeur auprès d'Air Canada jusqu'en 1959 alors qu'il est passé au ministère des Transports. Après un stage d'un an à la section des examens auprès de la Division

des normes et règlements de vol, il a été nommé inspecteur des voies aériennes à Montréal, en 1960. Il a été enfin nommé directeur de l'aéroport de Québec en 1965, poste qu'il occupait avant sa plus récente nomination à Montréal.

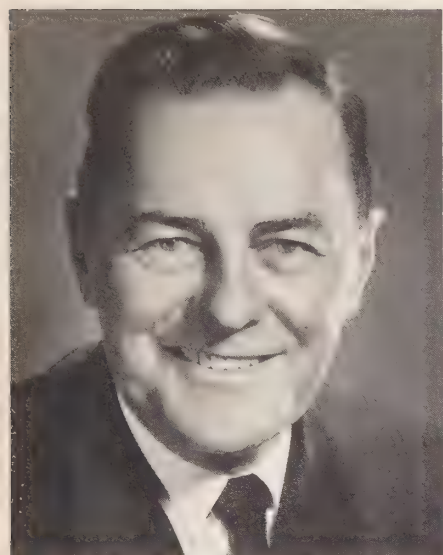
M. Habel est marié et père de six enfants.

### M. Léopold Brochu

M. Léopold Brochu, qui a fait carrière dans l'aviation canadienne avant de passer au ministère des Transports en 1964, devient le nouveau directeur de l'aéroport de l'Ancienne Lorette, à Québec. À ce poste, il succède à M. Habel.

Natif de la Beauce, M. Brochu a fait ses études au collège Ste-Marie, de Beauce, et à l'Académie de Québec. Il s'est distingué comme pilote avec l'ARC durant la dernière guerre mondiale, méritant même la DFC (croix du service distingué dans l'aviation). Il est demeuré dans l'ARC après la guerre assumant d'importantes responsabilités auprès du Commandement de la défense aérienne pour le continent nord-américain. Il détenait le rang de capitaine au moment de sa retraite en 1964.

Avant sa récente nomination à l'aéroport de Québec, il était attaché aux services des aéroports de la région de Québec. M. Brochu n'assumera cependant ses nouvelles fonctions à Québec qu'après le retour à Montréal de M. Delisle qui a



Charles Delisle



J. E. Goulet



R.-J. Fichaud

été prêté à l'administration centrale des Services de l'Air à Ottawa. Il agit donc comme administrateur suppléant des aéroports relevant de la région de Québec en attendant le retour de M. Delisle.

M. Brochu est marié et père de cinq enfants.

## M. Charles Delisle

M. Charles Delisle, de Montréal, administrateur régional des aéroports, est prêté au bureau central des Services de l'Air, à Ottawa, où il fait partie de l'équipe désignée pour mener à bien le projet d'un nouvel aéroport international pour la région de Montréal.

Natif de Montréal, M. Delisle est un diplômé de l'Université Laval. Ancien pilote de l'ARC, il était affecté au service de bombardement en Angleterre et en Afrique du Nord durant le dernier conflit mondial. A la fin de 1943, ayant effectué 54 raids aériens sur l'Europe, il a reçu la DFC (croix du service distingué dans l'aviation).

Après la guerre, il a piloté les avions de Rimouski Air Lines jusqu'en 1949 alors qu'il passait au ministère des Transports à titre de directeur de l'aéroport de Mont-Joli. En 1953, il devenait inspecteur des voies aériennes de la région de Québec, et, cinq ans plus tard, il était nommé surintendant régional des aéroports de la même région.

En 1965, on le retrouve au poste de régisseur régional de l'aviation civile à Montréal, puis, en 1967, il devient administrateur régional des aéroports de la région de Québec.

M. Delisle est marié et père de cinq enfants.

## M. J.-E. Goulet

Le directeur de l'aéroport international de Montréal, M. Joseph Emile Goulet, pour sa part, fait partie du nouveau comité technique chargé d'élaborer des projets d'expansion intérimaires pour l'aéroport de Dorval. M. Goulet est directeur de l'aéroport de Montréal depuis 1963.

Natif de la Beauce, il a fait ses études à Berthierville, P.Q. Après son service militaire dans l'ARC comme pilote durant le dernier conflit mondial, il est passé au service du ministère des Affaires des anciens combattants à Québec. En 1947, on retenait ses services comme directeur de l'aéroport de l'Ancienne Lorette à Québec. Après avoir passé quelques mois comme directeur suppléant de l'aéroport de Frobisher Bay, en 1958, il était nommé directeur adjoint de l'aéroport de Montréal. En 1963, il succédait au regretté Leigh Capreol comme directeur de l'aéroport international de Montréal.

M. Goulet est marié et père de deux enfants.

## M. R.-J. Fichaud, nouveau météorologiste régional

Une autre nomination récente aux Services de l'Air de la région de Québec est celle de M. Raymond-Jean Fichaud au poste de météorologiste régional. M. Fichaud a été confirmé dans ses nouvelles fonctions il y a quelques mois. Il occupait auparavant le poste de surintendant régional des services météorologiques généraux.

Natif de Montréal, M. Fichaud est entré au Service météorologique en 1949 après avoir obtenu une maîtrise ès sciences de l'Université de Montréal. Il détient également une maîtrise ès arts de l'Université de Toronto.

M. Fichaud, au début de sa carrière avec le ministère des Transports, a d'abord été affecté au bureau météorologique de Goose Bay. En 1953, il revenait à Montréal pour y assumer les fonctions d'analyste et de prévisionniste au Service central d'analyse.

En 1957, il est passé au service de la marine comme météorologiste. A bord du H.M.C.S. Bonaventure, il a acquis une précieuse expérience en œuvrant dans des régions éloignées du Canada — régions de l'Atlantique Nord, de la Méditerranée et des Caraïbes.

Il a quitté la marine en 1962. Après un séjour de quelques années à Trenton comme officier d'état major au Commandement du transport aérien (météorologie), il est revenu à Montréal en 1966 à titre de surintendant régional des services météorologiques généraux.



# transport people



## Running Interference

The strange-looking vehicle in the photo is a 1927 Chevrolet with A. E. (Bert) Stallard at the wheel.

Mr. Stallard, who retired recently after 41 years of service with the department, operated the vehicle when he joined the Radio Branch of the Department of Marine and Fisheries (a forerunner of D.O.T.) in 1927 to assist the interference investigation inspectors. He moved from the Radio Regulations Division to administration as a chauffeur in 1962.

At a luncheon in Winnipeg honoring Mr. Stallard on his retirement, the guest of honor was presented with a transistor portable radio by W. E. Fenn, regional director of air services for the Central region.

## First R. E. Munn Bursary

The first Dr. R. E. Munn Bursary has been presented to Norman Poulton, son of Mr. and Mrs. J. Poulton of Toronto, at the last general meeting of the Toronto local of the Department of Transport Component, Public Service Alliance of Canada.

The bursary was named after Dr. Munn, a meteorologist and member of the To-

ronto local, to honor his dedicated work and time spent in the formation and operation of the former Meteorological Headquarters Association, which later was one of the founding bodies of the former Canadian Air Services Association.

The bursary, presented annually to a dependent of a member of the Toronto local, is worth \$100.

Mr. Poulton, the first recipient of the bursary, is a first year Arts and Science student at the University of Toronto.



Left to right, Dr. Munn, R. G. Chapil, local president, and Mr. Poulton.

## NEWSMAKERS NOS VEDETTES

*J. A. (Angus) Sutherland*, has retired from the engineering department of the Canadian Transport Commission after 19 years as a signal engineer. Friends who gathered to wish him well included *R. A. Shier*, director of engineering, *L. H. Hawkins*, chief signal engineer, and *Mike Mayo*, administration officer.

A suggestion designed to improve the department's operations has won a \$30 suggestion award for *M. G. Jeffries*, a radio operator at Alert Bay, B.C.

Winners of the 1968 Department of Transport Bursaries to assist the dependents of D.O.T. personnel were announced recently. They include *John M. Harper*, Vancouver; *Gregory S. MacCoubrey*, Moncton; *Lorraine M. Bateman*, Moncton; *Joanna M. Tilley*, Moncton; *Dennis J. A. Cook*, Edmonton; *Wendy M. Black*, Vancouver; *Annelies Bertsch*, Regina; and *Jeffrey A. Irvine*, North Bay, Ont.

*Mrs. Joan Montgomery*, secretary to the district manager of the Victoria Marine Services base, and editor of the base's NEWSLETTER, has been promoted to a new position as secretary to the regional director in Vancouver.

Eight D.O.T. representatives from Central region headquarters at Winnipeg were on hand recently for the official opening of the new air terminal at Flin Flon, Manitoba. The eight included *W. G. Anderson*, *D. M. Robertson*, *C. R. Brereton*, *P. B. Sheppard*, *M. J. MacLean*, *R. Ross*, *C. A. Johanson* and *D. L. Belanger*.

# retirements

## J. H. Lane

John Hamilton ("Hammy") Lane, inspector in charge of radio regulations at Halifax, has retired after 35 years of service with the department.

Mr. Lane joined the Department of Marine, a forerunner of D.O.T., in 1932 after serving for a time aboard merchant marine vessels. He was appointed inspector in charge at Halifax in 1959.

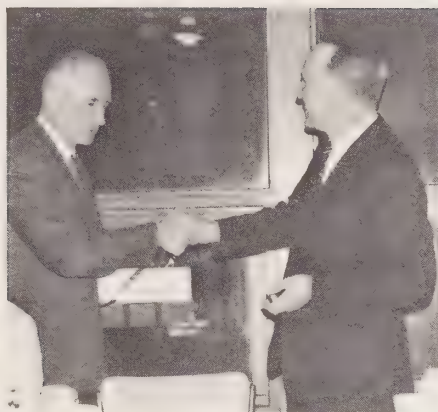
One of the most memorable experiences of his career occurred while he was serving as a radio operator aboard the tanker "Mina Brea" when it caught fire off Canso, N.S., in August 1929 while loaded with 1,500,000 gallons of gasoline.

Although the fire raged for three days, destroying the bridge and living quarters and reducing the engine to pulp, it was discovered when the hulk was towed into port that the tanker had not lost one drop of its gasoline cargo.

The incident earned the ship and its crew a measure of fame with publication in the widely-read newspaper feature "Ripley's Believe It Or Not."



Mr. and Mrs. J. H. Lane.



**RETIREES AT SASKATOON**—*Sid Young, telecommunications area manager at Saskatoon, has retired after 40 years of service. Sid, who began his career in 1928 as a radio operator with the Marconi Company on the West Coast, served at such posts as the Canadian Government tug Dainty the hopper barge Chesterfield, the old Lurcher lightship, and the N.B. McLean on its maiden voyage in 1931. After a short "stint" at Kenora, Ont., he was transferred to Saskatoon in 1940. Mr. and Mrs. Young now live in Victoria, B.C. In the photo above, Mr. Young is presented with a retirement gift by W. E. Fenn, regional director of air services, Central region.*

## C. M. Williams

Charles MacGregor Williams, superintendent of radio regulations at Moncton, has retired after 40 years of service.

Born in Newport, South Wales, Mr. Williams emigrated to Canada and joined the East Coast Radio Service of the Department of Marine and Fisheries on April 16, 1928.

He subsequently served either as radio operator or officer in charge on government ships that included the icebreakers *Mikula* and *N. B. McLean*.

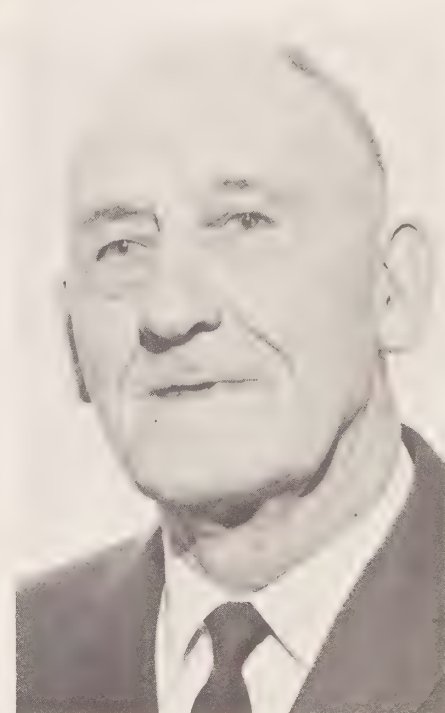
Coast station assignments included Cape Hope's *Advance* and *Nottingham Island* in the Arctic, Cape Race, Nfld., and *Camperdown Radio* on the East Coast.

He was promoted to the position of radio inspector at Halifax in 1950, then appointed regional superintendent at Moncton on Nov. 11, 1960.

## Fred W. Tulk

Fred W. Tulk, a plumber at Gander International Airport, has retired after 23 years' service.

Co-workers gathered in the plumbing shop to present Mr. Tulk with some camping and fishing equipment and wish him well.



**GANDER RETIREMENT**—*Graham Powell, a sheetmetal worker with the Airports and Property Management Branch, has retired after 23 years' service at Gander International Airport. Friends and fellow workers, who gathered in Hangar 13 to say farewell, presented Mr. Powell with an easy chair, a hassock and a smoker's set.*



# TRANS- CANADA

## IMCO Secretary-General In Ottawa For Talks

*Ottawa*—Canada is making exceptional contributions to IMCO, the Inter-Governmental Maritime Consultative Organization, its secretary-general said here recently.

In Ottawa for discussions with Gordon W. Stead, assistant deputy minister, marine, E.C.V. Goad said Canada is contributing professional expertise and wise counsel to the world body.

Mr. Stead is currently heading a study group to prepare guidelines for developing further services to member states and to recommend organization changes for increased efficiency.

IMCO, with headquarters in London, England, is dedicated to the safety and facilitation of international shipping. Its 70 member states own and operate more than 90 per cent of the world's ocean-going tonnage.

Canadian representation is provided largely by the Federal Department of Transport, which has permanent representation under Mr. Stead's guidance.

Following his discussions in Ottawa, Mr. Goad left for New York for consultations with U Thant, secretary-general of the United Nations, and Washington, where he conferred with officials of the United States Government.

## WeatherShip Boarded

*Station "Papa"*—For the second time in 18 years, a Canadian weathership has been boarded on station.

During Patrol Number Seven, the Vancouver yacht *Valaris*, returning from the Vancouver-Honolulu race, crossed Station "Papa" and her crew boarded CCGS *Vancouver* for breakfast and baths.



## Data Processors To Meet In February

*Ottawa*—A two-day data processing conference sponsored by the Federal Institute of Management will be held Feb. 18 and 19 at the R. A. Centre in Ottawa.

Plans for the conference began after the success of the first conference sponsored by the F.I.M. in January 1968.

The 1969 conference will attempt to meet the needs of three distinct groups of data processors: the scientific, the general business area and the more esoteric.

The overall theme of information processing/retrieval/dissemination has been established to enable logical branching between all three areas.

A luncheon on the second day and a wine and cheese party are also planned to round out the two-day conference.

**IMCO SECRETARY-GENERAL IN OTTAWA**—E. C. V. Goad, secretary-general of the Inter-Governmental Maritime Consultative Organization, confers with Gordon W. Stead, assistant deputy minister, marine, during a visit to Ottawa recently.

**SECRÉTAIRE GÉNÉRAL DE L'IMCO A OTTAWA**—Le secrétaire général de l'IMCO, M. Colin Goad, lors de son séjour récent à Ottawa, a loué l'apport exceptionnel du Canada à l'oeuvre de l'Organisation intergouvernementale consultative de la navigation maritime. M. Goad, de Londres, a eu des entretiens au ministère des Transports avec le sous-ministre adjoint à la marine, M. Gordon W. Stead, à droite dans la photo ci-dessus. M. Stead dirige le groupe permanent de représentants canadiens auprès de l'IMCO. C'est également M. Stead qui dirige présentement un groupe d'étude préparant le schéma qui servira à établir de nouveaux services pour les États membres de l'organisme.



**TOP MARK**—A. R. Bastian, a financial officer trainee at Moncton, N.B., received the highest mark in Canada in a 1968 cost and management examination conducted by the Society of Industrial Accountants of Ontario.

### Four Trophies Presented At Coast Guard College

*Sydney, N.S.*—Four trophies have been presented at the first annual Awards Day sponsored by the Canadian Coast Guard College.

Making the presentations was A. H. G. Storrs, director of marine operations. Master of ceremonies was Captain Gerard Brie, director of the college.

The Stead trophy, donated by Gordon W. Stead, assistant deputy minister, marine, was presented to leading cadet Richard Meyers of Mount Forest, Ont., as the best all-round first year cadet.

The Inter-Divisional trophy, donated by Eric Brand, former director of marine operations, was awarded to the Macdonald Division for the excellence of its performance in all aspects of training. Cadet Captain James Andrews of Neepawin Sask., accepted the trophy.

Two other trophies were awarded for sports competition with both going to the Macdonald Division.

The first went to the soccer team headed by officer cadet Gregory Nickerson of Clark's Harbour, N.S., while the trophy for the cross-country event (relay races) went to officer cadet Serge Desroches of Montreal, captain of the team.

Guests at the ceremony included parents, civic representatives and friends of the college.



### Air Cushion Rescue

*Vancouver*—The Canadian Coast Guard's new hovercraft has completed its first mission by taking four persons off a cabin cruiser stranded in a Fraser River sewage channel.

The hovercraft, under the command of Capt. Bert Mead of Ottawa, was called in after the craft was spotted because the water was too shallow for conventional rescue.



**WITH THANKS**—W. H. Mackie, regional superintendent of observational services, Vancouver, presents a book award to Commodore Clifford Edgecombe, right, master of the S.S. Oriana. At left is Radio Officer E. R. Le Gear, who also received an award for excellence in voluntarily making weather observations for the department while at sea. The Oriana, whose officers have won awards annually for the past six years, originated 857 weather reports during 1967.

### ÉTUDIANTS DE LAVAL AU MINISTÈRE—

Un groupe d'étudiants de l'Université Laval, qui ont entrepris de tracer les plans d'une aéroport comme projet de classe, ont visité récemment les installations du ministère des Transports à Ottawa, Montréal et Toronto. Il s'agissait d'étudiants de troisième année à l'École d'architecture de l'université. En compagnie de leur professeur, ils ont fait leur tournée en vue de recueillir les données nécessaires pour mener à bien leur projet. Dans cette photo, prise à l'occasion d'une séance d'études à Ottawa, on voit, de gauche à droite, le professeur Léo Zrudlo; les étudiants Jacques Desbiens, de Champlain, Pierre Avard, de Québec, et Christine Tremblay, de Québec; M. P. Beinhaker, de la Direction de la planification et de la recherche aux Services de l'Air du ministère; et M. W. A. Ramsay, conseiller senior en architecture aux Services de l'Air.

**STUDENT VISITORS FROM LAVAL** — A group of students from Laval University in Quebec City paid a visit to the Department of Transport recently while studying airport architecture. The students, all in their third year of studies with the university's school of architecture visited D.O.T. installations in Montreal, Ottawa and Toronto. In this photo, taken in Ottawa, the visitors, including left to right, Professor Leo Zrudlo, students Jacques Desbiens of Champlain, Pierre Avard of Quebec, and Christine Tremblay also of Quebec, are met by P. Beinhaker of the Planning and Research Branch of Air Services, and W. A. Ramsay, senior architectural adviser with Air Services.



# Transport ALBUM des Transports



## New Ferry in Service

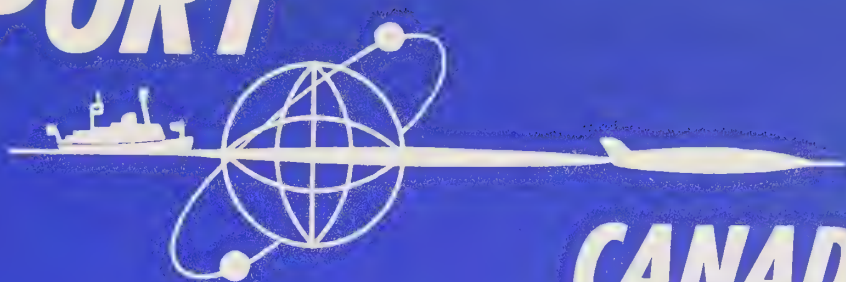
*The John Hamilton Gray*, most recent addition to the fleet of ferries serving Prince Edward Island, was officially christened last Sept. 21 and went into service in mid-October. The ship, christened by Mrs. Jean Marchand, wife of the Minister of Forestry and Rural Development, is named after two Fathers of Confederation, one from Prince Edward Island and the other from New Brunswick. The new ferry is operating between Borden, P.E.I., and Cape Tormentine, N.B.

## Nouveau transbordeur en service

*Le John Hamilton Gray*, plus récente acquisition de la flotte de transbordeurs desservant l'Île du Prince-Edouard, a été officiellement baptisé le 21 septembre dernier et est entré en service à la mi-octobre. La marraine, au baptême, a été Madame Jean Marchand, épouse du ministre des Forêts et du Développement rural. Le nouveau navire des Chemins de fer Nationaux est nommé d'après deux pères de la Confédération: l'un venant de l'Île du Prince-Edouard et l'autre du Nouveau-Brunswick. Le transbordeur assure le service entre Borden, Île du Prince-Edouard, et Cape Tormentine, Nouveau-Brunswick.

# TRANSPORT

MARCH-APRIL • 1969 • MARS-AVRIL



# CANADA

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Rédacteur français Édouard Deslauriers

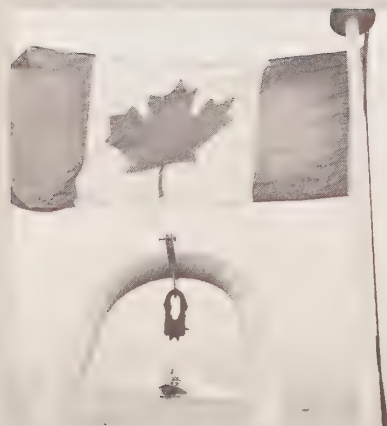
L'IMPRIMEUR DE LA REINE, OTTAWA, 1969.

# TRANSPORT



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### COVER

The cutter CCGS *Moorhen* races into the frame of a lifting device aboard her sistership, CCGS *Racer*.

### FRONTISPICE

Le cotre «Moorhen», navire de recherches et de sauvetage de la Garde côtière, paraît dans l'embrasure d'un levier sis sur le pont arrière du n.g.c.c. «Racer».



## Greetings

On taking up my new appointment, I should like to extend my best wishes to all members of the Department. Regrettably I have not yet had a chance to meet very many of you, but I am hoping to do this in the course of the weeks ahead. The Department of Transport has a long standing tradition in Canadian public service, and I am very proud to have an opportunity to be associated with it. Transportation has played a vital role in the development of our country and may have an even more important role to play in the future. It has also been a great force for unity within our country and this role will be as important in the future as in the past. I look forward to joining you in maintaining the high standards of performance of the Department and meeting the new challenges of the future.

## Heureux d'être avec vous

Au moment d'assumer mes nouvelles fonctions, je voudrais offrir mes meilleurs vœux à tous les membres du personnel du Ministère. Je regrette de ne pas avoir eu l'occasion de rencontrer un plus grand nombre d'entre vous, mais j'espère le faire au cours des prochaines semaines. Le Ministère des Transports a établi depuis longtemps des traditions au sein de la fonction publique canadienne et je suis très fier de l'occasion qui m'est donnée de m'y associer. Le transport a joué un rôle vital dans le développement de notre pays et il peut être appelé dans l'avenir à jouer un rôle encore plus important. Il a été aussi un facteur essentiel d'unité pour notre pays et il continuera de jouer ce rôle dans l'avenir. J'envisage avec plaisir de me joindre à vous pour maintenir les normes de rendement élevées du Ministère et faire face aux nouveaux défis que nous présente l'avenir.

*Le sous-ministre*

O. G. STONER

*Deputy Minister*



# AU REVOIR, M. BALDWIN

Plus de 300 membres du personnel des Transports se sont réunis à l'hôtel Skyline d'Ottawa, en fin de décembre, pour saluer le départ du sous-ministre John R. Baldwin qui vient d'assumer la présidence d'Air Canada après 15 ans au ministère.

Il y a eu des discours, des présentations et surtout un ressassage de vieux souvenirs. M. Baldwin lui-même en avait quelques-uns à rappeler ainsi que ceux qui lui rendaient hommage.

Une des plus amusantes anecdotes de la soirée a été racontée par le ministre Paul Hellyer.

Il paraît, d'après M. Hellyer, que M. Baldwin, voulant un jour mêler un peu le plaisir aux affaires, décide de faire une inspection du réseau de canaux du Rideau et de la Trent. A cette fin, il se choisit une petite embarcation démodée, usée, fatiguée, et même, dit-on, sur le point d'être mise à la retraite. L'embarcation n'était définitivement pas en bon état et était difficile à manoeuvrer, particulièrement à basse vitesse. Comme seul membre d'équipage, M. Baldwin avait emmené son fils.

Or, il paraît que la petite embarcation a fait une entrée plutôt boîteuse dans une écluse de la Trent, heurtant même les murs au passage. Le maître-éclusier, témoin de l'incident, n'a pas hésité à dire au «capitaine» de l'embarcation ce qu'il pensait de cette façon de manoeuvrer. Il

ne se serait pas non plus servi d'un langage des plus raffinés pour transmettre son message.

M. Baldwin aurait tenté de s'expliquer, mais il n'y avait pas moyen de faire taire le maître-éclusier qui en avait long à dire sur ce qu'il pensait du «capitaine» et de son embarcation. Finalement, d'un air piteux, le sous-ministre a dû s'excuser et promettre d'être plus prudent à l'avenir.

Et, de continuer le ministre, le maître-éclusier n'aurait peut-être jamais soupçonné qu'il avait ainsi réprimandé un sous-ministre si le jeune fils de M. Baldwin n'avait pas par la suite raconté l'incident au surintendant des Canaux, M. George Easton.

Natif de Toronto, M. Baldwin a décroché son baccalauréat ès arts de l'Université McMaster en 1933. Il est également boursier de la Fédération des anciens de l'Université de l'Ontario (1933-1934).

Il a obtenu sa maîtrise ès arts en 1934, et, la même année, il était proclamé boursier de la Fondation Rhodes. Il a ensuite séjourné à l'Université d'Oxford de 1934 à 1937. C'est là qu'il a décroché en 1936 son baccalauréat ès lettres.

En 1937, il devenait membre de la faculté d'histoire de l'Université McMaster. L'année suivante, il était nommé secrétaire de l'Institut canadien des affaires extérieures, poste qu'il a occupé jusqu'à

son entrée au ministère des Affaires extérieures, en 1941.

Muté au secrétariat du Cabinet, bureau du Conseil privé, en 1942, il a agi comme secrétaire adjoint du Comité de guerre du Cabinet, et par la suite, comme secrétaire adjoint du Cabinet, de 1943 à 1948.

Nommé président de la Commission des transports aériens en 1949, M. Baldwin est demeuré à ce poste jusqu'à sa nomination comme sous-ministre des Transports, le 1<sup>er</sup> juillet 1954.

Au nombre des organismes et groupements qui ont déjà bénéficié de ses services ou auxquels il s'intéresse encore activement, il y a le sénat de l'Université McMaster, la Fédération des oeuvres d'Ottawa, l'Orchestre philharmonique d'Ottawa, le Cercle universitaire d'Ottawa, le Club Kiwanis, l'Association canadienne des sciences politiques et l'Association canadienne d'histoire. Ses passe-temps favoris sont le ski, la navigation de plaisance et la cuisine.

Marié en 1944 (à Dorothy M. Pearson), M. Baldwin est père de trois fils, John Russel, Brian Richard et Blair Christopher. Ils étaient tous de la fête au Skyline en compagnie de M. et Mme Baldwin.

Au nom du personnel, M. D. A. McDougal, adjoint exécutif du sous-ministre, a présenté à M. Baldwin un appareil de télévision en couleur.

# FAREWELL, MR. BALDWIN

More than 300 staff members from headquarters gathered in Ottawa's Skyline Hotel recently for an affectionate farewell to John Russel Baldwin, who headed the department as "D.M." for close to 15 years before his appointment as president of Air Canada last December 15.

There were speeches, presentations and plenty of reminiscing, both by Mr. Baldwin and those who had turned out to pay tribute to him.

One of the best stories was told by Transport Minister Paul Hellyer.

It seems, recalled Mr. Hellyer, that Mr. Baldwin once decided to combine a little business with pleasure and take an inspection tour of the Rideau and Trent Canal systems. He picked up a small, little-used and unmarked vessel that barely floated and was due for retirement. It didn't run well and was almost impossible to steer at low speeds. For crew, he took along one young son.

Somewhere along the Trent system he barged his boat clumsily into a lock and bumped around a bit. A very salty lockmaster leaned over and filled him in verbally about what he thought of the vessel and its master.

Mr. Baldwin tried to explain about the steering difficulty. The air turned blue as

the lockmaster continued. Finally, with a slightly red face and promises to be more careful, the deputy minister continued his trip.

And, said Mr. Hellyer, the lockmaster probably would never have known he had chewed out a deputy minister, had not Mr. Baldwin's young son repeated the story to Canals Superintendent George Easton, as one of the funniest sights he had ever seen . . .

A native of Toronto, Mr. Baldwin earned his B.A. degree at McMaster University in Hamilton in 1933 and won the 1933-34 University of Ontario Alumni Federation Fellowship.

He earned his M.A. degree at the University of Toronto in 1934, was named Rhodes Scholar for Ontario the same year, and went on to study at Oxford University from 1934 to 1937.

A member of the faculty of history at McMaster for the next year, he was appointed national secretary of the Canadian Institute of International Affairs in 1938 and joined the Department of External Affairs in 1941.

Transferred to the Cabinet Secretariat, Privy Council Office, in 1942, he was assistant secretary of the Cabinet War

Committee and subsequently assistant secretary to the Cabinet from 1943 to 1948.

Appointed chairman of the Air Transport Board in 1949, Mr. Baldwin remained in that position until his appointment as Deputy Minister of Transport on July 1, 1954.

Mr. Baldwin's voluntary activities have included service on the Senate of McMaster University, with the Ottawa Community Chest, on the board of directors of the Ottawa Philharmonic Orchestra, as a member of Le Cercle Universitaire d'Ottawa, the Ottawa Kiwanis Club, Canadian Political Science Association, and the Canadian Historical Association. His hobbies include skiing, boating and cooking.

Married in 1944 to Dorothy M. Pearson of Ottawa, Mr. Baldwin has three sons, John Russel, Jr., Brian Richard, and Blair Christopher, all of whom attended the reception for Mr. Baldwin with their mother.

The Baldwins were presented with a color television set by D. A. McDougal, executive assistant to the deputy minister, on behalf of the staff of the Department of Transport.

*Le nouveau président d'Air Canada, M. Baldwin, au centre, est photographié au moment de la réception en son honneur en compagnie du ministre Paul Hellyer et du jeune Blair Christopher, fils du héros de la fête.*

*Mr. Hellyer, Mr. Baldwin and his son, Blair, at Ottawa reception honoring our "D.M." on his appointment as president of Air Canada.*





# a million miles under steam\*

by Thomas E. Appleton  
Department of Transport  
Marine Historian

In the opening years of the present century, the west coast of Vancouver Island was yet a remote and lonely place. As British Columbia developed, the few ships which had hitherto sailed the western boundaries, chiefly sealing schooners and small traders, were augmented by an increasing number of larger vessels. It then became necessary to provide aids to navigation.

Prominent among these aids, a first order dioptric light was established at Estevan Point in 1910. This powerful flashing light is mounted on a concrete tower which rises 125 feet above high water mark to guide shipping approaching the entrance to Nootka Sound, cradle of Pacific coast history.

To serve this lighthouse and other aids established about the same period, it was decided to provide a powerful seagoing steamer which would work out of Victoria. At that time, although Canadian shipbuilders on both coasts had a long record of wooden construction, steel shipbuilding was relatively new and was mainly in the Great Lakes area. The new ship, ordered from the Collingwood Shipbuilding Company of Georgian Bay, was one of a number of first generation Canadian built government steamships.

The coming of the lighthouse at Estevan Point had fired the imagination of the west coast marine community, one poet being moved to write:

"The angry coast, the rocky reef,  
No more are feared by man  
And those that sail will never fail  
To praise the light of Estevan."

Appropriately enough, the new steamer, launched in the summer of 1912, was christened *Estevan*. The name commemorates a heritage stretching back much farther than the building of the light, for it honors the memory of Lieutenant Estevan Jose Martinez of the Spanish Navy, the officer who took possession of the locality on behalf of the King of Spain in 1789.

Martinez thus precipitated a period of grave tension between his country and Britain, known as the Nootka Affair,



which nearly came to war. As Captain Cook had originally discovered Nootka in 1778, the matter was extremely touchy in that age of imperial expansion.

Fortunately, and thanks largely to the friendly and diplomatic association of the men on the spot, Captains Vancouver and Quadra of the British and Spanish Navies respectively, cool heads prevailed and an amicable settlement was achieved. In continuation of this spirit, and notwithstanding that Cook had named the place Breakers Point in 1778, the Spanish name of Estevan Point was restored in the British Admiralty chart of 1849.

If it is fitting that the name of *Estevan* should be borne by a ship which is dedicated to the arts of peaceful navigation, her long and useful career has lived up to the spirit of the idea. Still in commission at the time of writing, but nearing the end of her days, the *Estevan* is a 212-foot twin screw vessel with reciprocating steam engines giving a speed of 12 knots.

Advanced for the period, the new vessel had a steel maindeck carrying heavy winches and derricks for lifting buoys in deep water, was fitted with electric light, internal telephone, and the then recently-introduced "wireless" telegraph apparatus. As to the accommodation, a report of the time states that:

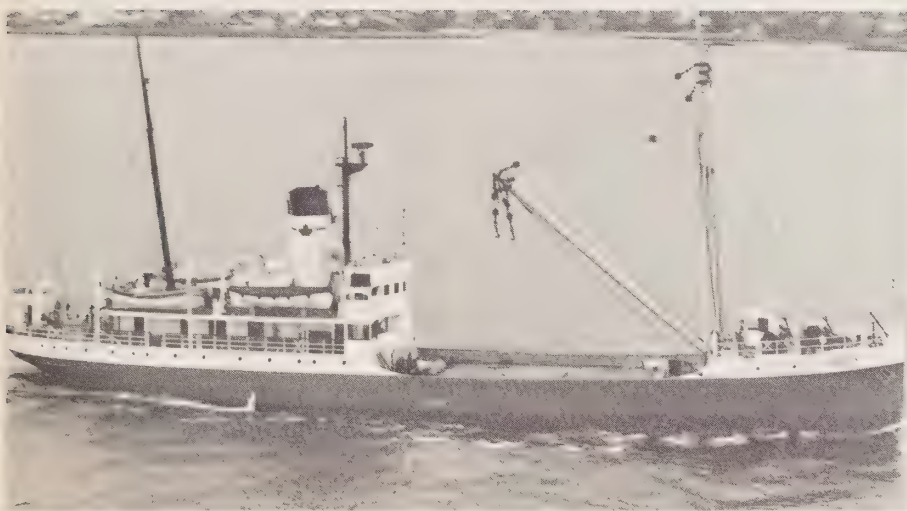
*The Estevan at Collingwood in 1912, just before she sailed for Victoria by way of South America. Behind her and partially visible at right is the old Simcoe which was lost with all hands off the Magdalen Islands in 1917. The Simcoe's story is related in detail in "Usque Ad Mare," Mr. Appleton's history of the Canadian Coast Guard and Marine Services which is being published by the Department of Transport.*

(Photo courtesy Public Archives of Canada)

"Her staterooms and cabins are panelled in yellow pine, enamelled white, and all the officers' and seamen's quarters are furnished in the latest approved manner, and the vessel is classed at Lloyd's 100 A1."

After 57 years of hard service, the ship retains the dignity of the period. Wide decks provide ample room for handling buoys and heavy equipment; the dining saloon, right aft in the old-fashioned way, has transom seats and swivel chairs which, with comfortable upholstery, set off the table linen with its crystal and silverware. Still enamelled white, with mahogany doors, brass fittings and polished wood furniture, the accom-

\*We only work to the nearest million. Anyone who thinks it should be more or less is welcome to discuss it with the author. The Editors.



*The Estevan today. After 57 years of hard service, the ship retains the dignity of the period in which she was built and the finest tradition of craftsmanship anywhere.*

modation has a comfortable warmth and quietness typical of steamships.

While Collingwood was building the ship, supervision on behalf of the Department was exercised by their naval architect from Ottawa, Charles Duguid, and by Mr. Burns, chief engineer of the Marine Service ship *Quadra*, who was sent from Victoria to look after the machinery installation.

At that time, the Panama Canal was not quite ready for traffic, so the *Estevan* was routed for Victoria by the southern tip of the American continent. A crew was engaged for the voyage under the command of Captain A. A. Lindgren, a well known Pacific coast shipmaster, who specialized in long distance ship delivery and had successfully brought many of the coastal steamers to British Columbia from Britain.

Leaving Collingwood on the seventh of November 1912, the *Estevan* sailed through the Lakes and the St. Lawrence canals to take her final departure from Quebec. After coaling at Hampton Roads, Bahia and Montevideo, she arrived at the Chilean port of Punta Arenas. Here she was greatly admired by the marine authorities as being of a type highly suitable for attending to lights in Chilean waters and visiting officials expressed the intention of advising their government to build such a ship.

The next leg of the voyage lay through the desolate channels of the Magellan Straits, a tortuous stretch of pilotage which saves steamers from the longer ocean route around Cape Horn. Some 300 miles in length and twisting and turning among the high mountains by which it is surrounded, the passage is characterized by heavy squalls alternating with gloomy rain and calms.

Little used today because of the Panama Canal, the Straits were more difficult in 1913 when aids to navigation were poor and the shores were inhabited by primitive Patagonian Indians of uncertain intentions.

Only a few years previously, a famous navigator, Joshua Slocum, who sailed the sloop *Spray* singlehanded round the world, had experienced an exciting encounter

there when hordes of naked Indians boarded his little vessel in the quiet of the night and were repulsed by means of carpet tacks which the resourceful Slocum had scattered on deck. The *Estevan* was also boarded, but in a friendly way, as Capt. Lindgren stopped his ship to allow fleets of dugout canoes to come alongside for food, tobacco and clothing.

Eventually, by way of San Diego, the new lighthouse ship arrived at Victoria, on March 4, 1913, to be greeted by banner headlines in the *Colonist* newspaper—"ESTEVAN REACHES VICTORIA TODAY."

It was a proud moment for the Marine Service on the Pacific coast, the *Estevan* taking her place as the largest of a fleet of four belonging to the Department of Marine and Fisheries.

Capt. Lindgren left the ship on completion of his contract, handing over the command to Capt. Charles Barnes, lately of the *Newington*. The chief officer, also from the *Newington*, was Mr. W. Hallgren, while the chief engineer was Mr. Bell from the Grand Trunk Pacific steamship *Prince George*.

Some permanent places were filled from those who had come out from Collingwood, notably by Mr. Saul, the second mate, and Mr. Sutherland, the second engineer. Mr. Sutherland, who was promoted to chief engineer shortly afterwards, served in the *Estevan* for 22 years except for a period of war service in Mesopotamia as an officer with the Royal Engineers inland water transport.

After a refit at the Wallace Shipyard in North Vancouver, the *Estevan* sailed on her first supply trip, to Triangle Island lighthouse, on May 15, 1913.

Since then, in fair weather and foul, from the Strait of Georgia to the Gulf of Alaska, the *Estevan* has steamed nearly a million miles.

In early years, when aviation was unknown and communications of all kinds were limited, she would often be diverted to some remote settlement to embark a hospital patient or to deal with flood or fire.

In the endless round of lighthouse supply, while the *Estevan* lay offshore rolling in the Pacific swell, her boats would land food and fuel on many an exposed beach; in many places there is no beach



and the boats would creep in to the cliff face, timing their approach carefully in the breakers, to sling the stores on the lighthouse derrick where the keeper would manhandle them up by winch.

For many families the *Estevan* was the only link with the outside world although the marine radio network, which was introduced when the *Estevan* was built, did much to break the utter loneliness. At Christmas, when the hearth and home of closely-knit lighthouse communities takes on a special meaning, the *Estevan* never failed to bring the mail and the seasonal supplies which, carefully ordered months before, had been assembling at Victoria as time wore on. Despite the weather, which could hold up operations for days or weeks, the families were always supplied in good order and it is claimed that the only item ever lost, a mail order piano which somehow came adrift in the boatwork, is not really lost for the boat's crew know where it is.

There have been many changes in the ship since building in 1912 but not all are apparent. The original marine boilers were replaced by the water tube type in 1935, they were fitted to burn oil instead of coal in 1958—the *Estevan* was one of the last coal burners on the Pacific coast—but the outward appearance is much the same and the feel of the broad deck planking recalls the vessels of another era.

Perhaps change is more apparent in conditions of service which, after two wars and the depression, are vastly different from those of 1913. Wages were then low, the master of the *Estevan* would get no more than \$130 a month, the crew about \$35 to \$40, but the dollar would buy much more.

However, for the crews of government ships in those days, there was no continuity of employment, no leave with pay and no pensions on retirement.

In the nineteen-thirties, when Canada lay inert under a blanket of depression, the wages of all on board were arbitrarily cut by 10 per cent. Petty reductions in complement were made by discharging the galley boy and the engineroom storekeeper and it was difficult to keep the ship in her usual state of upkeep due to this and the scarcity of consumable stores.

Looking back from today, such things seem remote or even trivial but they were

then the hard realities of life to many Canadians.

In this climate of scarcity, rumors would fly about from time to time that the *Estevan* was doomed. A letter of 1933 to Ottawa anxiously enquires whether it is true that the *Estevan* is to be scrapped and replaced by a chartered steamer.

But times improved and, as they did, along came the Second War. When enemy submarines were sighted in the Pacific, the *Estevan* was fitted with a defensive gun aft but it was never used in anger.

In the postwar years, the *Estevan* took on a new lease of life and, when the former Canadian Marine Service was designated the Canadian Coast Guard in 1962, the black hull, white upperworks and buff funnel were repainted in the present red and white color scheme.

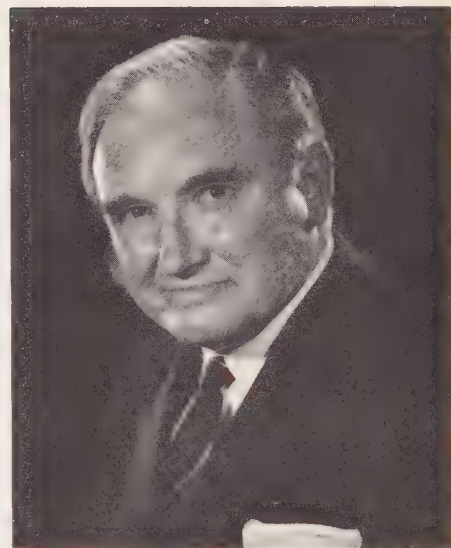
In personnel, of course, there have been many changes. Captain Barnes retired in 1922 to be succeeded by Captain H. R. Bilton. Since then, the vessel has been commanded in turn by Captains Hughes, Ormiston, Peterson, Davidson and the present master, Capt. R. D. Engelson.

In the engineroom, where Mr. Sutherland had been chief for 22 years, his successor was T. E. Morrison who, after long service in the Marine Service ships on the Pacific coast, eventually became the marine agent of the Department at Victoria.

As for the ship herself, it is easy to evoke a sentimental attachment. However, it would be ridiculous to suppose that no improvements in ship design and construction have taken place since 1912, and lighthouse tenders today, with their shipborne helicopters, radically different machinery and greatly-increased accommodation, are very unlike the steamers of old, both in appearance and in the feel of life on board.

Nevertheless, humans, and particularly sailors, have a way of baffling the planners of this life and in the crew's accommodation under the foredeck of the *Estevan*, much different from the efficient living quarters in more modern vessels, there is the much-loved comfort of an old shoe.

It will be long before memories of comradeship and service at sea will no longer be recalled by the name *Estevan*.



## ABOUT THE AUTHOR

Thomas E. Appleton, marine historian with the Department of Transport, has had long experience in the world of ships and shipping.

Since joining the Department in 1960 he has travelled widely on a variety of assignments, his most important being the writing, editing and publishing of his book "Usque Ad Mare", a history of the Canadian Coast Guard and Marine Services which is being published by the Department.

A lifelong student of marine history, the author started his career on deck as an apprentice in the merchant service.

He is a professional engineer and a member of the Engineering Institute of Canada.

Born in Scotland, Mr. Appleton was attracted early to small boat sailing and now owns an International Dragon Class yacht in Ottawa where, from 1965 to 1967, he was Commodore of the Britannia Yacht Club.

He spent the war years as an RNVR officer, in command of minesweepers and escort ships, and later served for six years on the active list of the Royal Canadian Naval Reserve.

# Suppression of Hail in the U.S.S.R.

by J. D. Holland,  
A/Supervisor,  
Physical Research Unit,  
Meteorological Branch.

*Mr. Holland spent two weeks in the U.S.S.R. during the past summer, studying Soviet hail research and hail suppression activities at the invitation of the Soviet Government.*



*A 100 millimeter gun used for firing silver iodide shells into hail clouds.*

Hail is a serious problem in many parts of Canada, particularly Alberta, where a hail research project has been in operation since 1956.

Sponsored by the federal and provincial governments with the Meteorological Branch playing a leading role, the project's aim is to acquire enough information about the nature of hailstorms to be able to reduce or suppress completely the damage they cause.

Reports from the Soviet Union over the past few years indicated that the Russians have already solved the hail problem, so it was that I found myself in the U.S.S.R. in July, 1968, along with Dr. W. Hitschfeld of McGill University, to discover just what was being done in the way of hail suppression there and whether the techniques being used might be applicable to Canada.

We were very well received in the Soviet Union where we were taken to five of the main hail suppression areas in the country, given the opportunity to talk to the scientists and other workers conducting their hail suppression program, to see their equipment and mode of operation, and be told of the results of their hail suppression work.

We were also permitted to take pictures, all our questions were answered and we were taken to talk to the farmers on whose

behalf the hail suppression work is being carried out, in order to learn their evaluation of the program.

In the five areas we visited, all in the vicinity of the Caucasus mountains, 1,940,000 hectares of farm land are being protected against hail. Since one hectare equals approximately  $2\frac{1}{2}$  acres, this figure is close to five million acres or 7,800 square miles.

In most of their work, the Russians are using artillery to fire silver iodide shells into hail clouds, but in some areas, rockets are being used instead of guns.

Sixteen hail suppression centres employing about 800 people and covering between 100,000 and 200,000 hectares each, were involved in the areas we visited.

Briefly, the hail suppression technique used in the U.S.S.R. operates in the following manner: Hail is presumed to grow in an "accumulation zone" in the cloud where the liquid water content is very high. The high liquid water content arises because of the vertical air currents reaching a maximum at the level of the accumulation zone and then falling off above that level.

The level of the accumulation zone with respect to the freezing level is very critical, since if it is too warm there will be no hail and if it is too cold there will likewise be no hail.

But if the accumulation zone is in the 0 to -20 degrees C level, hail can grow very rapidly. Zones of high liquid water content are identifiable on radar, and the U.S.S.R. technique uses this property.

In a highly refined technique, using radars at two wavelengths (3.2 cm and 10cm) they claim that by comparing the signal returned from the accumulation zone by the two radars they are able to make accurate positive identification of the presence of hail.

In actual practice, however, they are finding it more economical to identify the potential hail zone by means of 10 cm radar only. The identification of hail is less positive with only one radar, but the two-radar system is much more costly.

When potential hail has been identified by radar in the 0 to -20°C level in a cloud, the coordinates of the hail centre and its elevation are passed by radio or telephone to the gun or guns within range of the hail centre and they fire silver iodide shells to burst in the hail centre of the cloud between -6 and -10 degrees C. One hundred grams of silver iodide are contained in each shell, which, on bursting, provides 1015 crystals in the atmosphere per cubic kilometre to serve as potential hail nuclei. The addition of artificial hail nuclei to the cloud means that many hailstones compete for the liquid water pre-



sent in the cloud instead of the few hailstones naturally formed. The result is that the hailstones formed are much smaller and melt before reaching the ground.

As many as thirty silver iodide shells may be fired into an individual storm over a period of one or two hours or it may be necessary to fire only one. It is claimed that the effect of firing the silver iodide shell into the cloud is usually noticeable on radar within a few minutes.

Individual storm studies were presented showing how hailstorms approaching the protected area ceased hailing upon being seeded and resumed hailing again after seeding had been stopped.

Other studies showed storms which were broken up by a single shell and never resumed the production of hail.

Statistics were also presented showing the damage caused by hail in the protected area as compared with an unprotected control area both in years before protection began and in the years since. The statistical evidence indicates a decrease in hail damage under protection by 80 to 100 per cent.

Many arguments have been raised against the Soviet theory of hail formation, particularly the development of the accumulation zone, and the statistical analysis does not contain all the features which are desirable in such an evaluation. However, the results shown were very impressive and the scientific community seemed to be thoroughly convinced of the success of the technique.

We also had the opportunity to talk to representatives of the agricultural community in several areas, and found that officials of the Agricultural Administration ranging from Deputy Ministers to local administrators and managers of State Farms were all thoroughly committed to the method and completely convinced of its value and success.

The normal set-up in applying this technique to actual hail suppression is a central station equipped with two radars, which is the control station. The weather situation is monitored continuously, and when hail is forecast, the radars are turned on and watched continually for the development of hail echoes.

Each control centre covers a radius of approximately 40 km and is surrounded by 5 to 7 guns. Each gun covers a radius of 10 km, with the gun capable of firing a shell to a height of 4.5 km and to a distance of about 13 km.

The shells are set to explode by a timing device on the shell which explodes them at the appropriate spot in the cloud. A specially designed frangible casing ensures that residual particles will be too small to do any damage on reaching the ground.

In addition to our observation of the Soviet hail suppression activities, Dr.



*A 100 millimeter gun and silver iodide shell used for hail suppression in the U.S.S.R.*

Hitschfeld and I had an opportunity to observe many facets of Soviet life and had many interesting experiences.

We were met at the Moscow international airport by a receptionist and interpreter from the Hydrometeorological Service, who accompanied us during most of our time in Moscow. Here we met Dr. Kiziria, Head of the Weather Modification Department and Mr. Mazlov, Chief of the Foreign Division of the Hydrometeorological Service, who briefed us on the proposed itinerary for our visit and offered to make any special arrangements which we required.

We were also taken for a visit to the famed Moscow Circus, which both of us had missed on its North American tour.

After a short stay in Moscow, we flew by Aeroflot to Mineral'nye Vody, about 1300 km to the Southsoutheast, where we were met by a large delegation from the High Mountain Geophysical Institute including two interpreters and led by the Director of the Institute, Professor G. K. Sulakvelidze, the number one hail expert in the U.S.S.R.

The interpreters were particularly necessary, since neither Dr. Hitschfeld nor I spoke Russian, and very few of our hosts possessed any great facility in English.

As a result, all our talks were conducted through the interpreters, which made communication difficult and greatly lengthened the time required to give and receive ideas. However, the two young ladies who acted as our interpreters were very good in both languages and worked

long and hard to ensure the success of our visit.

From Mineral'nye Vody we were flown in a ten-passenger helicopter to Labinsk, one of the main centres of hail suppression in the North Caucasus. Here we spent four days at a field station situated on a hill some 10 or 12 miles from the agricultural town of Labinsk.

A cluster of small buildings consisting of dormitories, cook-house, weather office, briefing room, etc., plus several radars in trailers and three guns sitting on the hill constituted the nerve centre for hail suppression activities in the area.

At Labinsk, we were given briefings on all aspects of the hail suppression work: the theory of hail formation, the theory of suppression, hail forecasting, seeding technique, results of the hail suppression activities to date, experimental work in progress.

We were also shown the radars, briefed on the method of identification of hail in clouds by radar, shown the guns and shells and were given a demonstration of the firing of a silver iodide shell (into clear air).

Since the season of major hail activity in the Caucasus region is in May and June, we were unable to witness an actual hailstorm. However, one cold front did cross the area while we were there and hail was identified by radar about 80 km away, outside the protected area. The hail protection system went into operation, but the cold front passed over the protected areas causing only widely scattered light showers.





*Radar used in detecting hail in the U.S.S.R.'s hail suppression program.*

During the period of our stay at the Labinsk field station, we were also taken to visit two other hail suppression centres nearby, some of the outlying gunsites, and to visit the Labinsk Agricultural Administration and a nearby State Farm. Most of these excursions were accomplished by travelling in two three-passenger helicopters.

After leaving Labinsk, we travelled by bus to the High Mountain Observatory at Terskol where many studies of snow and ice are conducted on the slopes of Mount Elbrus, at 18,468 ft. the highest point in the Caucasus. This is also being developed as a resort area—skiing, hiking, camping, etc., and we rode a ski-lift to the top of Mount Cheget for a breathtaking view of Mount Elbrus. Many vacationers thronged the area, some having arrived by private motor car, but most having been brought in excursion buses.

Another highlight of our trip was our journey by bus through the Caucasus mountains over the Georgian Military Road, an outstanding engineering achievement connecting the North Caucasus with Trans-Caucasus area including the Georgian and Armenian Soviet Socialist Republics.

This road winds through the mountains along sheer cliff faces, across raging torrents of water, through tunnels, and served as an important military artery during the Second World War. All road signs, of course, were in Russian, but we were pleasantly surprised to be met by one in English at the border of Georgia which read "The Gates of Georgia are Open to Our Guests of Good Will".

At Tbilisi, the capital of Georgia, and again in Erevan, the capital of Armenia, we were overwhelmed by the hospitality extended to us and came away with warm feelings of gratitude.

In Georgia, for example, as is apparently the custom, we were escorted to the city limits by our hosts on our departure. There we all dismounted and said our farewells before proceeding on our way.

And when we reached Armenia we were met 75 kilometres outside the capital by the Director of the Hydrometeorological Service and the Deputy Minister of Agriculture of Armenia on the shores of Lake Sevan and were entertained at dinner and taken for a boat cruise on the lake before being escorted into the capital.

Erevan is a very ancient and very proud city, having just celebrated its two thousand seven hundred and fiftieth anniversary. The event has been commemorated by a fountain with 2750 jets. Here we were very close to the border of Turkey and could see the Mount Ararat of biblical fame from our hotel windows.

On Sunday we were taken to visit an old monastery of the Armenian Orthodox Church and found that a church service was being conducted with a goodly number of old and young people in attendance.

Hail suppression activities in Georgia and Armenia are conducted mainly for the protection of grapes, small fruits, tobacco and vegetables, crops with a high economic value. In the North Caucasus region, however, with higher per acre production of grain, the protection is also extended to grain crops. One of the special problems in Armenia was the forecasting

of hailstorms which sometimes develop during the night in the Ararat mountains of Turkey and move unexpectedly into Armenia in the early hours of the morning.

We found that there were many similarities between life in the U.S.S.R. and life in Canada, but also many differences. The population of the U.S.S.R. is composed of many ethnic groups, each with its own individual characteristics, just as in Canada. People on the streets in Moscow and other cities are dressed in Western style dress and the appearance of street crowds is thus much the same as in Canada. Bright colours and even some mini-skirts were in evidence. There were many private automobiles on the city streets, as well as taxis and trucks but between cities the highway traffic was composed mostly of trucks.

We were interested to discover that Soviet citizens as well as the foreigner required passports to travel from one part of the country to another. These had to be produced upon making airline reservations and upon checking into a new hotel, but were not required on other occasions.

The weather in Moscow appeared to follow a pattern similar to that experienced in many Canadian cities. It was fine and warm when we arrived there but travelling disturbances produced cool rainy weather during most of the remainder of our stay.

In the Caucasus regions, however, the weather was sunny and warm, getting hotter the farther south we went, till in Armenia daily maximum temperatures were in the 90's all the time we were there. We were advised that except for the occasional shower, this pattern continued throughout the summer.

The taking of photographs from moving vehicles is prohibited in the U.S.S.R., but we were permitted, even encouraged, to take pictures elsewhere, and brought back a number of coloured slides of the hail suppression equipment and installations and the people operating them, as well as shots of spectacular scenery in the Caucasus mountains.

Two of our hosts in the U.S.S.R., Dr. Kiziria and Profesor Sulakvelidze, paid us a return visit in August to study hail and weather modification research in Canada and we were very pleased to have the opportunity to show them what we are doing here, also in some measure to return their hospitality to us while in the U.S.S.R. and to show them some of the beauties of Canada.



# The "Iron Me

—reprinted from the *Cape Breton Highlander*



Cadet Denys Poulin of East Angus, Que., awaits the signal from Captain Gerard Brie, director of the Canadian Coast Guard College, that started the Cabot Trail Medley Relay Marathon.

*Les élèves-officiers du collège de la Garde côtière canadienne ont réussi, en fin d'année 1968, un exploit qui a suscité l'intérêt de toute la population de la région de Sydney. Ils ont en effet complété, dans le cadre de leur programme d'éducation physique, une course à relais de quelque 200 milles le long de la Cabot Trail, et celà, en mi-novembre, par un temps maussade et pluvieux. Dans cette photo, on voit l'élève-officier Denys Poulin, d'East Angus (Québec), attendant le signal de départ de la course donné par le directeur du collège, le capitaine Gérard Brie.*



Cadet David Kempling of Sarnia, Ont., passes the baton to Cadet Andy Tait of Abercorn, Que, as the relay progresses along the shores of the Bras d'Or Lakes.

*L'élève-officier David Kempling, de Sarnia (Ontario), passe le bâton à Andy Tait, d'Abercorn (Québec), au moment de leur rencontre sur la rive des lacs Bras d'Or.*

If you think the days of wooden ships and iron men are long gone, you're only half right. Most of the wooden ships are on the block or on the bottom, but the iron men are still being turned out by the Canadian Coast Guard College at Point Edward.

The hardiness of the college enrolment was evidenced last year when the cadets took to the road for a leisurely run from Port Hawkesbury to Sydney.

So what do you do for an encore after a rugged relay over 100 miles of hills and dales? Why, double the distance of course and choose the most gruelling race course available.

The cadets chose the Cabot Trail, two and a half times as long as the Sydney-Port Hawkesbury route and gruelling enough to scare off timorous drivers let alone runners. To toughen things up a little more, they set the run for Nov. 9 and put their first relay man on the road in the face of a 40-mile-an-hour wind with a forecast of rain, sleet and snow.

In the best tradition of the sea, the log of the race records the fact that the stiff winds provided rough going for the first 14 miles but after that it was at their backs and the going was fast, wet and cold. Kelly's Mountain was covered in no time flat as Cadet Bujold flew down the south side to the tune of six miles in 35 minutes.

From there to Margaree Forks, things went smoothly as a succession of well-garbed runners churned up 50 miles with a following wind. But after that, it was back into the teeth of the gale again.

A few of the harder runners tried it in shorts and sweatshirts, but as the log records, they soon became "blue babies." Most ran in full sweatsuits, caps and gloves and Cadet Janvier wowed the crowd with two sweaters, two pairs of pants, a muffler and ear muffs.

Once into the mountains, the wind lost some of its sting, but nature had other surprises in store. Cadet Mullins, for instance, running 20 feet ahead of the official car, realized suddenly that he was being shadowed by a large lynx in the darkness. The cat eventually lost interest in the race and the log records that "Bob Cat Mullins doesn't scare easily."

# of The Coast Guard College

The run through 60 miles of mountainous terrain took seven hours including a slip-and-skid encounter with an icy North Mountain which posed more of a problem to the official cars than to the runners.

Here's how the log describes the loneliness of these long distance runners as they raced through the darkness and cold:

"At night you have a circle of light with a black background and it is always the same. Try as hard as you can, you cannot reach the darkness to see what's behind it. It is forever the same so that sometimes you think you are in another world. If you know the road it doesn't matter, but most of the runners had never been on that road and had never run like this before.

"The scenery was beautiful, there was a bit of a haze, the trees were fully covered with fresh snow. Everything was white. All that broke the silence were the runners, slipping and sliding as they made their way forward in an endless series of switchbacks, cutbacks, hills and mountains.

"As the night wore on and everything seemed to be endless, the Buchanan Memorial Hospital at Neil's Harbour suddenly appeared on the right side. What a welcome sight! The worst was behind us! Smokey was the only peak left to cross where ice might hold us up, but somehow, nobody cared. We knew that, Smokey or no Smokey, we were going to make it and we were going home."

Back on the Trans-Canada at St. Ann's with 35 miles to go, the isolation came to an end as relayers ran through heavy traffic as well-wishers came out to meet them on the homestretch. Cadet Gerard raced into the college grounds on the last lap just 32 hours after the starting gun.

What to do next year? The cadets aren't sure yet, but you can be sure it will have to be a real acid test to upstage what is becoming known as "the Cabot Trail Caper."

The runners are proud of their accomplishments but they don't forget to give full marks to the support group of teachers who were there all the way. And a major bouquet goes to the college's physical education staff who trained the runners to the peak of conditioning necessary for completion of what must have been the most gruelling marathon ever undertaken in Cape Breton.

Farewell to the wooden ships and hail to the iron men!

—Photos courtesy B. W. Bachynsky,  
Canadian Coast Guard College.



*Cadet Tait approaches the Seal Island Bridge on the way back to the Canadian Coast Guard College.*

*L'élève-officier Tait arrive au pont de l'île Seal sur le chemin du retour au Collège de la Garde côtière.*



*Cadet Michael Gerard of Windsor, Ont., nears the finish line of the Cabot Trail Medley Relay Marathon as fellow officer cadets, teachers and Captain Brie cheer him on.*

*L'élève-officier Michael Gerard, de Windsor (Ontario), dernier membre de l'équipe, arrive enfin au collège aux applaudissements de ses confrères, du personnel et du capitaine Brie.*



# La Garde côtière, service indispensable



Le *Racer* en opération sur les côtes de l'Ouest canadien.

La Garde côtière canadienne a joué un rôle de première importance dans l'expansion maritime, économique et industrielle du Canada, depuis l'avènement de la Confédération.

La Garde ne porte son nom que depuis le 26 janvier 1962, époque où furent intégrés en un seul service, divers organismes de l'Etat. C'est à ce moment que fut formée la flotte qui plus tard devait relever du ministère des Transports.

Elle possède une longue et glorieuse histoire au service du transport maritime du Canada.

La Garde côtière comprend actuellement quelque 140 navires de tous genres, dont près de 60 de dimensions qui exigent le service de quart. Les navires de la flotte parcourent les eaux canadiennes, des Grands lacs aux chenaux les plus au

PHOTO-REPORTAGE DE  
L'OFFICE NATIONAL DU FILM

*Photos de Ted Grant*

Le *Labrador* exerçant sa puissance dans les eaux du St-Laurent.



Un officier, John A. McDonald.



Louis Duquet, officier en chef du Labrador.

Le John A. Macdonald bravant les éléments de l'Arctique.





# ON DUTY

by Bryan Goodyer

Information Services Division

Striking through the sky 30,000 feet above the Pacific Ocean and far above a floor of sun-swept cloud, a jetliner heads for Japan.

A crewmember works with quiet concentration and notes with satisfaction that the aircraft is right on course according to data received from Ocean Station "Papa," 860 nautical miles west of Vancouver.

The "station," a storm-ravaged 10 square miles of ocean, presents a picture quite different from that in the jet's serene crew compartment.

One of the Canadian Coast Guard's new weatherships — it could be either CCGS *Vancouver* or CCGS *Quadra* — is slowly bucking a howling gale, trying to maintain the position from which it serves as a navigational checkpoint for other shipping and for trans-Pacific aviation.

Aboard the ship, scientists and technicians, all well-schooled to working in what is regarded as one of the world's worst weather areas, are going about their tasks as though they were snugly ashore, sending out an almost endless flow of weather, navigational and oceanographic data.

Built at a total cost of nearly \$24 million, the two weatherships operate from the Department of Transport's district marine base at Victoria, B.C.

Built and maintained under the supervision of the Shipbuilding Branch (now a part of the new Department of Supply and Services), the Meteorological Branch and the Telecommunications and Electronics Branch, the ships were completed at the yard of Burrard Dry Dock Co. Ltd., North Vancouver.

The *Vancouver* entered service in April 1967, the *Quadra* in October of the same year, replacing the old Canadian Coast Guard weatherships, two ex-frigates, CCGS *St. Catharines* and CCGS *Stonetown* and the old standby ship, *St. Stephen*.

CCGS *Vancouver* and CCGS *Quadra* are the largest ships in the Canadian Coast Guard fleet, each measuring 404 feet, three inches long over all and 50 feet in breadth.

Each has a loaded displacement of 5,605 tons, a range at 14 knots of 8,400 nautical miles plus 2,000 miles reserve and a top speed of 18 knots. This last-



# T OCEAN STATION 'PAPA'

mentioned statistic becomes important when the ships are called upon, as are all Canadian Coast Guard vessels, to take part in search and rescue operations.

Each vessel is at sea for a period of seven weeks, comprised of one week sailing to and from station and six weeks on station.

Each ship normally has a maximum complement of 100 men, including a meteorological staff of six under a chief meteorological officer, a telecommunications staff of 11 under a chief telecommunications officer and two to five oceanographers depending on the availability of personnel under a chief oceanographer.

Practically all crewmembers have single accommodation that includes a desk, a table, table lamp and berth.

The ships are equipped with officer's and petty officer's lounges, a recreational room, a cinema and a hobby shop. Recreation and hobbies consist of movies twice a week, woodworking, leatherwork, the weaving of rugs, ship modelling and other crafts.

Some of the men paint, others study and the Victoria Public Library supplies a large number of books. Many a thesis has been written on the weatherships by budding oceanographic students.

## Unusual Appearance

Most notable feature of the ships to the casual observer is the great radar dome towering high above each. The dome houses a new type of balloon-tracking radar capable of automatically tracking meteorological balloons up to a height of 100,000 feet, of detecting storms as far away as 200 nautical miles and of keeping track of aircraft within a radius of 70 miles.

For many years, meteorological information has been collected on a volunteer basis by merchant ships travelling the world's sea lanes and reported to meteorological stations ashore for use in preparing forecasts.

Events of the Second World War and the rapid development of international aviation routes after the war made it apparent that a more precise source of such information was needed. Aircraft particularly need upper air data for high altitude operations.

As a member of the International Civil Aviation Organization (ICAO), Canada committed itself to operate jointly with the United States one station on the Atlantic Ocean and one station on the Pacific Ocean.

Between 1947 and 1950, Canada operated one vessel on an alternating basis with the United States on Station "Baker" in the North Atlantic. This operation was not satisfactory economically, however, so Canada took over the complete operation of Station "Papa" on the North Pacific.

The weatherships *Stonetown* and *St. Catharines* (both ex-Royal Canadian Navy frigates) were put into service on Station "Papa" commencing Dec. 1, 1950. These ships continued to man the station, located at 50 degrees North Latitude, 145 degrees West Longitude, until they were replaced by CCGS *Vancouver* and CCGS *Quadra*.

## Surface Weather Program

Both ships are fully-manned and equipped to handle the surface meteorological observations and upper air soundings which must be made each day.

In addition to three anemometers for measuring surface wind, the ships are equipped with pressure instruments that include two precision aneroid barometers, a marine mercury barometer, a three-day marine barograph, and four Stevenson screens.

Each ship is also equipped with the British National Institute of Oceanography's Muirhead wave recorder which has taken much of the guesswork out of determining wave heights and periods.

There can still be a bit of occasional guessing, however, as the crew of the *Quadra* found out during a hurricane on Dec. 1, 1967. The needle on the wind velocity was forced beyond the highest marked limit of 100 miles per hour, and the wave recorder indicator went past its highest marked limit of 60 feet during the storm.

Since Station "Papa" has been manned by Canadian ocean weatherships, with the exception of a few short periods, continuously since 1950, some valuable statistics on various aspects of the weather at this point in the northeastern Pacific have been compiled.

The warmest month seems to be August with a mean temperature of 55.8 degrees Fahrenheit, followed by September with a mean temperature of 55.6 degrees. The coolest month appears to be March (40.5 degrees), followed by February (41.2), January and April (each 41.5). Temperatures rarely exceed 60 degrees (only .3 per cent of all observations), or fall below 32 degrees (0.2 per cent of all observations).

Wind speeds average 20 knots or more from October through March, with November having the highest average wind speed of 25 knots.

The highest sustained wind speed on record was the 100 mph reading already mentioned.

Although a month-by-month analysis of wave heights has not yet been worked out, high waves, in excess of 20 feet, are infrequent, occurring on the average of only 3.4 per cent of the observations in the course of a year.

Low visibilities of less than two nautical miles seem to occur most frequently in August (about 28 per cent of the observations) and least frequently in October (about two per cent of the observations).

## Upper Air Program

A balloon inflation shelter has been designed to accommodate aerological balloons which are capable of reaching an altitude of 100,000 feet or higher. When inflated with helium, these balloons measure eight feet in horizontal diameter and 12 feet in height. Each ship carries about 200 cylinders (57,000 cubic feet) of helium.

Four upper air or rawinsonde ascents are made daily at regular six-hour intervals. The balloon carries aloft a radiosonde instrument which measures the temperature, pressure and relative humidity of the air and transmits this information by radio transmitter to a ground receiver.

The balloon also carries aloft a special target which is followed by a stabilized radar system to obtain speed and direction of the winds at any desired altitudes.

The balloon rises until it bursts, usually at a height of about 100,000 feet, thus terminating the upper air soundings.



## Special Radar Unit

The balloon-tracking radar on these new ships is perhaps the most advanced equipment of this type in the world. It was designed and engineered by the Sperry Gyroscope Co. of New York and is designated as "Wind Finding Radar SP6504." The antennae itself is housed in a spherical plastic shelter comprising the highest component of the ship.

The radar is capable of automatically tracking the balloon and computing the wind directions and speeds every six seconds with a print-out of time, slant range, azimuth, elevation, target height, wind direction and wind speed.

## Oceanographic Studies

In the realm of oceanography, the weather-oceanographic vessels are making an increasingly important contribution, the most extensive series of observations to date having been made at Station "Papa."

The physical oceanographic studies are concerned with the variability of properties in the ocean, its thermal structure, internal wave action, large scale air-sea inter-action and related subjects. It has been found that, far from being a scientifically uninteresting area, the northeast Pacific undergoes physical processes upon which science has just begun to touch.

Biological oceanographic studies have been under way since 1956, including studies governing the living resources of the Northeastern Pacific. Research concerning the relationship between the ocean's production of drifting microscopic plants (phytoplankton) and its production of fish are of major importance to the salmon fishery of the North American West Coast, and to British Columbia in particular.

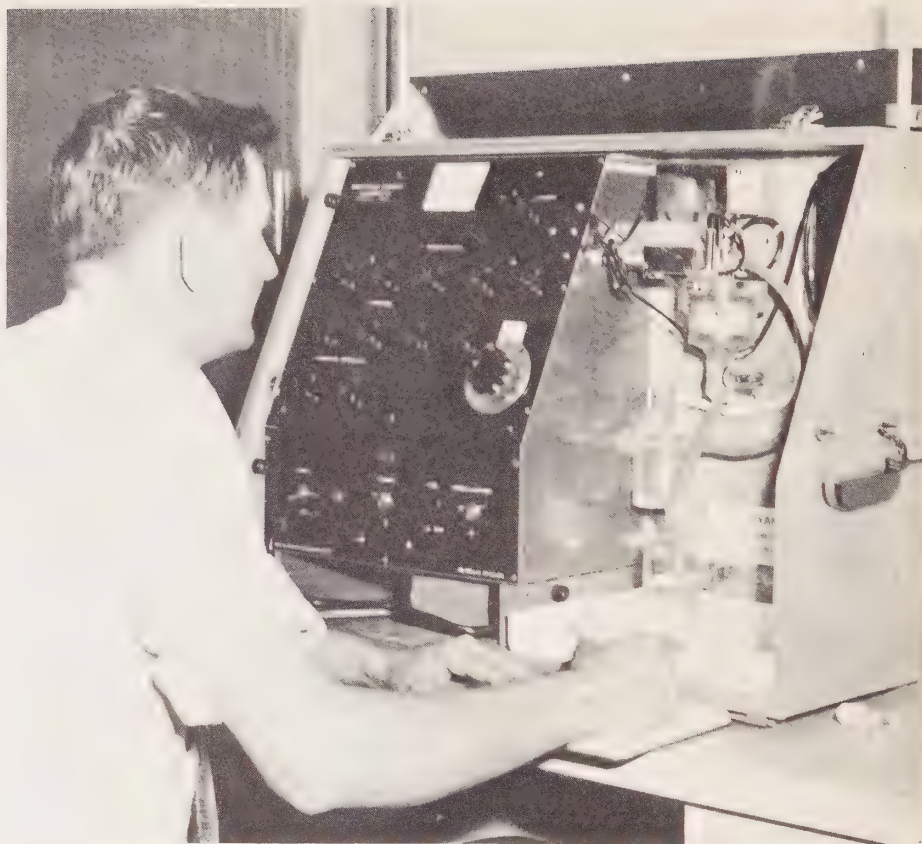
Investigators from the Pacific Oceanographic Group have been the biggest users of the data, but many scientists from other countries, in particular the United States, Japan and Russia, have examined it intensively. An important user in the United States has been the United States Naval Post-Graduate School at Monterey, California.

Information compiled aboard the weather-oceanographic vessels is being utilized in the classrooms of many universities offering courses in oceanography in Canada, the U.S. and Japan.

It has also been used as a basis by some international bodies to determine whether certain proposed studies should or should not be pursued, the experience gained at Station "Papa" having provided a yardstick by which the possible magnitude of other such undertakings can be measured.

## Aids to Navigation

Although the vessels are commonly referred to as "weatherships," one of their most important functions is that of



*An oceanographer electronically measures the salinity of ocean water samples aboard CCGS Quadra.*

navigational aid to ships and aircraft, a duty for which they are fitted with Long Range Aid to Navigation (LORAN) equipment to establish their own positions accurately at all times.

A 400-watt radio beacon transmits constantly on medium frequency, a four-letter group indicating the station and its position, based on the grid system of two-letter co-ordinates.

This facility enables any ship or aircraft fitted with direction-finding equipment to obtain a line of position with fairly high accuracy at ranges of several hundred miles.

Ships and aircraft at closer range (14 miles for surface ships, 200 miles for aircraft) can on request be given their precise position by means of radar.

On an average "on station" patrol, more than 500 aircraft are furnished not only with their position, but also their true course and speed and weather conditions at their altitude.

The ships also serve as important communications relays between other vessels with less powerful radio equipment and shore radio stations.

Each vessel is equipped with facsimile radio receiving equipment, by means of which weather maps can be received from the mainland.

Each has a radio room and a communications and electronic equipment centre with additional automatic transmitters for air-ground and ship-to-ship communication.

High frequency direction-finding equipment is provided and is particularly useful in search and rescue work.

There are three sets of portable emergency communications equipment for use in lifeboats, as well as portable VHF-FN radio telephone units for use in workboats or otherwise as needed.

An amateur radio "Ham" room is also provided on each vessel for the use of radio hobbyists among the crew and is equipped with a one-kilowatt single side-band transmitter.

Fishing equipment also provides a mixture of research and off-hours pleasure.

On bringing in a catch, the seagoing "sportsmen" record the species, its stomach content and other information that is passed on to fisheries research experts.

The ships also keep a log of sightings of sea birds and marine animals such as whales, seals and dolphins, which are forwarded on to appropriate government departments to add to man's knowledge of the world around him.





# cruising the western arctic

— reprinted from the Victoria Marine Agency NEWSLETTER

*Do the travel advertisements at this time of year leave you longing for faraway places and adventure? Maybe, as certain Coast Guardsmen will tell you and as the following article suggests, it's all in the way you choose your words.*

From the exotic shores of the Aleutian Islands to the sunny slopes of the Boothia Peninsula, the luxurious ship CCGS *Camsell* wends its way each year, through the serene blue waters of the Chukchi Sea, Beaufort Sea, Ammundsen Gulf, Victoria Straits and finally through the magnificent Rae Straits to the unequalled splendor of that great international port, Spence Bay.

The voyage takes the ship through all the splendors of this great panoramic untouched splendor of the last frontier. The flora, fauna and the unquestionable friendliness of the natives are yours to enjoy on this fun-filled three-month sojourn along the routes travelled by such great frontiersmen and adventurers as Ammundsen, Lennie, Halkett, Conibear, Ali, Candow, McKeown, Hill, Caton, Hurry, Patton, Stevenson, Roberts, Duncan, Scura, Chung, Simpson, Statham and many, many more, too numerous to mention.

The cuisine is without a doubt the

greatest in the world with all manner of exotic and unusual dishes such as snorkers, stew, tripe, etc. The accommodations are spacious and luxurious. From each of the well-appointed cabins is seen a magnificent view of serene surroundings. Each day is filled with excitement — fishing, boating, outdoor activities beyond compare.

Evenings are packed with electrifying happenings such as shows (sometimes triple horror), nightly gaming in the well-appointed lounges, light snacks in the ship's dining salon and dancing on the after deck amid the Northern Lights and strolls in the moonlight for those interested in the more romantic aspects of life in the Land of the Midnight Sun.

For further information on this delightful summer cruise, guaranteed to take you away from the boredom of everyday life, see your congenial cruise director, Mr. G. Booth. For bookings during the 1969 season, contact our local travel agent, Mr. J. R. Coates.



## Après 50 ans de loyaux services, une retraite bien méritée



M. Mercier

Joseph Paul Henri Mercier n'avait que 15 ans lorsque, le 28 octobre 1918, il s'est présenté à l'Agence de la marine du ministère des Transports, à Québec, pour occuper son premier emploi comme apprenti plombier. Maintenant contre-maître des plombiers à la même Agence, M. Mercier prendra officiellement sa retraite, le 27 mai prochain, après 50 ans et six mois de service, soit un record dans les annales du ministère des Transports.

Natif de Québec et issu d'une famille assez nombreuse, Henri s'est vu très jeune obligé d'abandonner l'école afin d'aider au gagne-pain de la famille. Son père, Honoré Mercier, était alors chef électricien à l'Agence de Québec. Il aurait sans doute aimé voir son fils devenir électricien, mais Henri a préféré plutôt s'initier à la plomberie.

Lors de son cinquantième anniversaire de service, en octobre dernier, M. Mercier a été le héros d'une fête organisée en son honneur par ses collègues à l'Agence de Québec. Le sous-ministre de l'époque, M. John R. Baldwin, lui a adressé en cette occasion un message personnel de félicitations.

«J'ai été agréablement surpris d'apprendre que vous avez, en date du 28 octobre 1968, complété cinquante années de service avec le ministère à l'Agence de Québec, précisait le sous-ministre, et je profite de l'occasion pour vous féliciter

chaleureusement. Votre long et excellent travail est certainement très louable. J'espère sincèrement que vos derniers mois à l'emploi du ministère vous seront agréables, et que vous continuerez à jouir d'un bon état de santé pour plusieurs années à venir après votre retraite.»

Au cours de sa longue carrière, M. Mercier a servi sous six agents maritimes régionaux, dont les plus récents sont M. Walter Manning, aujourd'hui directeur des travaux maritimes du ministère à Ottawa, le capitaine Georges-Edouard Gaudreau, à sa retraite depuis l'an dernier, et l'agent maritime actuel, M. Jean-Paul Godin.

Il a fort bien connu également feu le capitaine Joseph E. Bernier, valeureux commandant de l'Arctic, qui s'est illustré, au tournant du siècle, au cours de nombreux voyages d'exploration dans les eaux les plus septentrionales de l'archipel Arctique. C'est au cours d'une de ses expéditions dans le Grand Nord que le capitaine Bernier, le 1<sup>er</sup> juillet 1909, a dévoilé une plaque sur l'île Melville marquant l'annexion au Canada de tout l'archipel Arctique.

M. Mercier, qui a eu l'occasion à maintes reprises de voyager à bord de l'Arctic, premier navire à vapeur de l'État spécialement conçu pour la navigation dans les glaces, conserve un pré-

cieux souvenir des heures passées en compagnie du capitaine Bernier. «C'était un homme affable, dit-il, particulièrement estimé de tous ceux qui l'entouraient. Son navire était son royaume et il veillait sur le bien-être de l'équipage comme un père dans son foyer.» Le capitaine Bernier fut d'ailleurs le seul commandant de l'Arctic, soit depuis son entrée en service en 1906 jusqu'à ce que le vieux navire soit mis à sa retraite en 1926.

Marié, M. Mercier demeure à Ville Montmorency, près de Québec, avec son épouse et deux filles encore à la maison. Le couple a eu neuf enfants, dont sept vivent encore. C'est auprès de ses enfants demeurant ici et là au Québec que M. Mercier se propose de passer les années de sa retraite.

«J'ai beaucoup voyagé durant mon emploi au ministère, dit-il. J'y ai pris goût. Maintenant, mes voyages me conduiront auprès de mes enfants que je n'ai pas eu l'occasion jusqu'à ce jour de visiter aussi souvent que je le voulais.»

Les deux filles encore à la maison sont Mlles Lyse et Jocelyne. Les autres enfants sont Mme Willie Lajoie, née Pauline, de Giffard; M. Henri-Paul Mercier, de St-Agait; M. Gaétan Mercier, en Abitibi; Mme Henri-Georges Tremblay, née Denise, de St-Justin; et Mme Angus McLalen, née Françoise, de Val Cartier.

# appointments

## Minister Names

### Peter M. Bonardelli

#### As Executive Assistant

Transport Minister Hellyer has announced that Peter M. Bonardelli, 44, a native of Ottawa, has assumed his duties as executive assistant to the minister.

Mr. Bonardelli succeeds R. A. "Sandy" Morrison, who has left the government service to take up a position in private industry.

A former consultant with Desroches, Jasmin and Associates, Montreal, Mr. Bonardelli has had wide experience in journalism and international relations that includes service with Canadian Petrofina Ltd., Stevenson and Kellogg Ltd., and the Canadian Inter-American Association.

A graduate of the University of Montreal where he received his Master's degree in history, Mr. Bonardelli is fluent in English, French, Italian and Spanish. He is married to the former Victoria Fernandez Concha and they have two sons, aged 12 and 13.



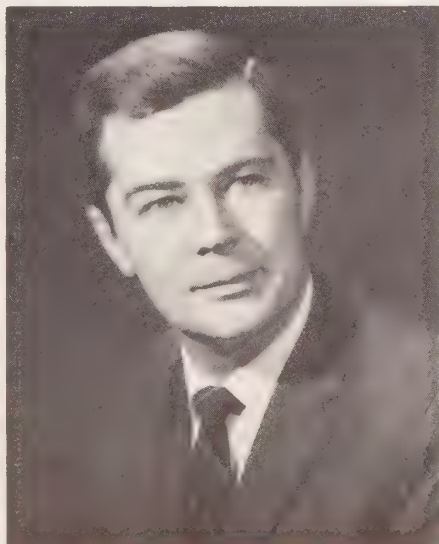
Peter M. Bonardelli

## D.O.T.'s New Director of Road and Vehicle Safety

Gordon D. Campbell, 40, of Ottawa, has been appointed director of the Road and Motor Vehicle Traffic Safety Office newly organized by the Department of Transport.

Dr. Campbell was formerly director of technical services with the Canadian Good Roads Association.

In assuming responsibility for coordinating the federal Government's role in motor vehicle safety, Dr. Campbell will investigate the need for safety, inspection and quality control standards, and promote co-operation among voluntary and governmental agencies engaged in traffic safety.



Gordon D. Campbell

# nominations

## Peter Bonardelli

### succède à

#### «Sandy» Morrison

M. Peter Bonardelli, âgé de 44 ans et natif d'Ottawa, succède à M. R. A. «Sandy» Morrison comme chef de cabinet du ministre des Transports. M. Morrison a quitté la fonction publique pour accepter un poste dans l'entreprise privée.

Ci-devant conseiller auprès de la maison Desroches, Jasmin et Associés, de Montréal, M. Bonardelli a acquis une vaste expérience du journalisme et des relations internationales. Il a été au service des compagnies Canadian Petrofina Ltd, et Stevenson and Kellogg Ltd et de la Canadian Inter-American Association.

Diplômé de l'Université de Montréal, où il a reçu une maîtrise en histoire, M. Bonardelli parle couramment l'anglais, le français, l'italien et l'espagnol. Il a épousé Victoria Fernandez Concha qui lui a donné deux fils âgés respectivement de 12 et 13 ans.

## Directeur nommé à la sécurité routière

M. Gordon D. Campbell, ancien directeur des services techniques de l'Association canadienne des bonnes routes, vient d'assumer ses nouvelles fonctions au ministère comme directeur du Bureau de la sécurité routière et automobile.

M. Campbell, natif de Winnipeg, est chargé de coordonner le rôle du gouvernement dans le domaine de la sécurité automobile. Il étudiera particulièrement le besoin de nouvelles normes de sécurité, d'inspection et de contrôle de la qualité et sera chargé de promouvoir la coopération entre les organismes gouvernementaux et volontaires qui s'occupent de la sécurité.

M. Campbell est membre de l'Institut des ingénieurs du Canada, de l'American Society of Civil Engineers et du Conseil de recherche sur les routes. Il est ingénieur professionnel enregistré en Ontario.



# TRANS-CANADA

## Terrace-Kitimat Terminal Opened

Terrace, B.C.—The Department of Transport's new air terminal building at this Skeena River community, about 30 miles north of Kitimat, has been officially opened by the Honourable Arthur Laing, Minister of Public Works.

The air terminal was built by Nor-Pine Construction Limited of Terrace at a cost of \$308,035.

Designed by architects of the Department, the building is a single storey structure that includes all facilities necessary for passenger services and cargo handling.

The main accommodation of the 138-foot by 64-foot terminal consists of a large waiting room, an airline ticketing area for CP Air, a baggage claim service with mechanical conveyor and various concession areas for restaurant, news stand, car rental booths and related passenger conveniences.

Telecommunications and meteorological services are also provided.



## National Revenue Employee Wins D.O.T. Award

Ottawa—Ideas are where you find them is apparently the watchword of an employee of the Department of National Revenue who has just demonstrated that suggestors are not restricted to their own departments.

In the highest award ever approved by the Department of Transport for a suggestion received from an employee of another department, Frederick A. Thomson of New Westminster, B.C., was awarded \$200 for a suggestion designed to improve operations within the Department of Transport.

Mr. Thomson, assistant registrar of shipping with the customs and excise division of the Department of National Revenue, suggested a revision to the annual report of vessels on registry that will benefit about 75 registrars in the field and "save considerable time and trouble" for the Department of Transport.

**CARRYING THE TORCH FOR SYDNEY—***The Honourable Allan MacEachen, Minister of Manpower and Immigration, uses a welding torch to cut a steel bar in a ceremony marking the formal opening of the new Department of Transport air terminal at Sydney, Nova Scotia, on Nov. 29, 1968. Mr. MacEachen wore a full suit of welder's togs to do the job under the supervision of Sydney steelworker Thomas Robertson. Present at the ceremony were the Honourable Victor Oland, Lieutenant Governor of Nova Scotia, and a number of provincial and municipal officials. H. M. Hutchon, regional director of air services, Moncton, was chairman. Airport Manager J. R. MacIntyre was in charge of the program arrangements. (See also photo on back cover.)*

**AÉROGARE INAUGURÉE À SYDNEY—***Le ministre de la Main-d'oeuvre et de l'Immigration, l'honorable Allan MacEachen, se sert d'un chalumeau pour couper une barre d'acier à l'occasion d'une cérémonie marquant l'ouverture officielle de la nouvelle aérogare de Sydney, en Nouvelle-Écosse. Vêtu en soudeur, le ministre s'adonne à sa tâche sous l'œil approbateur de M. Thomas Robertson, employé d'une aciérie de Sydney. Le lieutenant-gouverneur de la Nouvelle-Écosse, l'honorable Victor Oland, ainsi que des représentants des autorités provinciales et municipales étaient au nombre des invités à la cérémonie qui a eu lieu le 29 novembre dernier. Le directeur régional des Services de l'Air, M. H. M. Hutchon, présidait alors que le directeur de l'aéroport, M. J. R. MacIntyre, voyait à la bonne marche du programme. (Voir autre photo en couverture arrière.)*

## D.O.T. Employee and Son Cited In Rescue of Four

Ottawa—A D.O.T. staff member and his son have been presented with awards from the Royal Canadian Humane Association for their part in saving the lives of three men including an employee of the Trent Canal system who nearly drowned in a boating accident.

Lloyd C. Cope, a member of the personnel staff at headquarters, and his son, Christopher, were among four persons who each received a Parchment for Bravery from the association for their actions in a rescue Nov. 12, 1967 at Ashby Lake in the Land-o-Lakes region north of Kaladar, Ont.

The two other rescuers who each received the association's parchment were Gerald O. Patry, a City of Ottawa fireman, and H. E. Anderson, a member of the Canadian Forces base at Trenton, Ont.

The three men rescued were J. B. Howard of Peterborough, a lockmaster on the Trent Canal system, and Elmer and Earle Rogers of the Kingston area, all members of a hunting party that got into difficulty when its boat capsized in the rough waters of Ashby Lake about 9.30 p.m.

The trio were returning to their camp across the lake when winds gusting to 40 miles per hour capsized the boat, throwing them into the near-freezing water.

Hearing cries for help, the four rescuers, including Mr. Cope and his son, set out in their boats and converged on the accident scene from two different directions, pulled the three men to safety and took them ashore.

## Suggestion award

Mrs. Genevieve Burns, of Aylmer, Que., a stenographer in the office of the financial officer, Air Services, at Ottawa headquarters, has won a \$40 suggestion award for a proposal involving billing operations that was found to be an improvement in work procedure.

## Books

*"The Pathless Way" is Recommended by  
B.C. Civil Aviation Inspector*

Vancouver—A just-published book on flying in British Columbia by a young pilot who died about six months ago of a rare disease has won the recommendation of a B.C. civil aviation inspector.

"Although this book will be of interest to any and all persons within our flying fraternity," writes G. B. Tobiason, "many people with the department who formerly lived on the B.C. Coast may have known the author and it is mainly with this in mind that this information is forwarded."

Mr. Tobiason writes that, during the past year, a 42-year-old pilot named Justin de Goutiere, dying of a rare affliction called Motor Neuron disease, determined to leave behind a record of his experiences while flying in this, perhaps one of the most rugged flying areas in the world.

A pilot with B.C. Airlines from 1960 to 1966, de Goutiere became well known on the B.C. Coast from Vancouver to Prince Rupert and into Alaska.

He died in August, 1968, leaving his wife Anna and five sons.

## "Don't Scrap The Estevan"

—from the Victoria Marine Agency  
NEWSLETTER

Captain Bob Engelson, his officers and crew, have been discussing the possibility of preserving CCGS *Estevan* as a museum.

*Estevan* has been sailing on the West Coast for 56 years and the hundreds of men who have sailed with her feel she is part of the country's history and should not be scrapped.

The cost of maintaining a ship in the water is prohibitive to the idea of docking the ship near the Maritime Museum, but perhaps a portion of the ship could be preserved.

The stern contains a bench with the original upholstery running around three of the four bulkheads and swivel chairs bolted to the floor around the dining table. There is a certain style and elegance in the old ships that is no longer seen in the new models.

Colonel J. W. D. Symons, curator of the Maritime Museum, has stated that he'd be very interested in any sort of preservation and has suggested incorporation of a part of the ship as a wing of the museum or as a separate display for the Department of Transport.

## Well Known D.O.T. Architect Dies in Ottawa



Ray Wood

Ray Wood, chief of the International Terminals Division of the Construction Engineering and Architectural Branch, Air Services, died in Ottawa recently. He was 47.

Born in Belfast, Northern Ireland, Mr. Wood was educated at the Belfast Royal Academy. In 1942, he was named an associate of the Royal Institute of British Architects and a member of the Royal Institute of Architects of Ireland.

After practising in Belfast for a number of years, he brought his family to

Canada in 1957 where he joined the staff of the Department of Transport.

As chief of the International Terminals Division, Mr. Wood was responsible for the design of many of Canada's air terminal buildings and played a large part in the transformation of those early wooden wartime structures into the modern buildings of today.

Mr. Wood is survived by his wife Dorothy and two daughters, Hilary and Karen.



# Transport ALBUM des Transports



## Sydney Airport

The Department of Transport's new \$1,300,000 air terminal building at Sydney, N.S., was officially opened on Nov. 29, 1968 by the Honourable Allan J. MacEachen, Minister of Manpower and Immigration. The main building, which measures 270 feet by 80 feet, is a two-storey structure, surmounted by an air traffic control tower. There is a single-storey wing accommodating a restaurant, customs, immigration, health inspection and baggage handling. A five-storey section houses the air traffic control installations and office space.

## Aéroport de Sydney

La nouvelle aérogare du ministère des Transports à Sydney, en Nouvelle-Écosse, a été officiellement inaugurée, le 29 novembre 1968, par l'honorable Allan J. MacEachen, ministre de la Main-d'œuvre et de l'Immigration. Construit au coût de \$1,300,000, le nouvel édifice mesure 270 pieds par 80. Outre la tour de contrôle, il renferme les divers services administratifs ainsi qu'un restaurant, les services de l'immigration, de la santé et les installations nécessaires à la manutention des bagages.

# ***TRANSPORT***

Contenu  
Publication



## ***CANADA***

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Rédacteur français Edouard Deslauriers

L'IMPRIMEUR DE LA REINE, OTTAWA, 1969



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Two new Department of Transport aircraft, a Cessna Super Skyhawk and a Beechcraft Queen Air, are given the once-over by Howard Henn, Chief Executive Pilot. The Cessna will be used for ice reconnaissance and oil pollution patrol over the St. Lawrence-Great Lakes system; the Queen Air is one of eight machines of the same type which will be used by departmental aviation inspectors in the course of their duties in the various departmental regions.

M. Howard Henn, pilote spécial en chef, examine d'un oeil scrutateur un Super Skyhawk de marque Cessna et un Queen Air de marque Beechcraft, deux nouveaux aéronefs du ministère des Transports. Le Cessna sera affecté à la reconnaissance des glaces ainsi qu'à la patrouille de la pollution par les hydrocarbures dans le Saint-Laurent et les Grands lacs. Le Queen Air est l'un des huit appareils du même type qu'utiliseront les inspecteurs d'aviation en fonction dans les différentes régions du ministère.

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# Transportation Council

# Le Conseil des transports



**TRANSPORTATION COUNCIL**—Members of the Council, from left, E. L. Hewson, Director, Transport Policy and Research; V. F. Nelson, Director General, Personnel; G. W. Stead, Assistant Deputy Minister, Marine; O. G. Stoner, Deputy Minister; Hon. James Richardson, Minister Without Portfolio; Hon. Paul Hellyer, Minister of Transport; G. A. Scott, Assistant Deputy Minister, Air; G. Sicotte, Assistant Deputy Minister, General; M. C. Tilley, Senior Financial Advisor; D. A. McDougal, Executive Assistant to the Deputy Minister. (See article page 4).

**CONSEIL DES TRANSPORTS**—Les membres du Conseil sont, de gauche à droite, le directeur des méthodes et des recherches, M. E. L. Hewson; le directeur général du personnel, M. W. F. Nelson; le sous-ministre adjoint pour la marine, M. G. W. Stead; le sous-ministre, M. O. G. Stoner; le ministre d'État, l'hon. James Richardson; le ministre des Transports, l'hon. Paul T. Hellyer; le sous-ministre adjoint pour l'Air, M. G. A. Scott; le sous-ministre adjoint à la direction générale, M. G. Sicotte; le conseiller financier ministériel, M. G. C. Tilley; l'adjoint exécutif au sous-ministre, M. D. A. McDougal. (Voir article en page 4).



# important instrument of policy coordination

The creation of the Transportation Council, pictured on Page 3, represents a significant step in the management of the Department of Transport. It now meets weekly with a prearranged agenda and it ensures that the Minister, Hon. Paul T. Hellyer, and the Minister Without Portfolio, Hon. James Richardson, maintain close and continuing dialogue with senior officers of the department.

A Cabinet Minister must answer to Parliament for the operations of his department and is also responsible for the policy which governs those operations. Obviously, in a department as large as Transport with its far-flung activities in Marine and Air, this poses complex managerial and executive problems.

One of the most important of these problems is communication—and the best way is still face-to-face. Is government policy laid down by the Minister being

effectively carried out not only at Ottawa headquarters, but perhaps even more importantly, at regional levels? And is the Minister kept aware of the pitfalls, actual and potential, that lie in wait between policy and practice? Moreover, is the best collective advice from the department on current problems and long range planning always available to the Ministers in reaching their decisions?

These are the types of questions that will be discussed at the TC's weekly meeting in the 7th Floor Board Room of the Hunter Building. Members of the council are the Hon. Paul Hellyer and Hon. James Richardson, Minister Without Portfolio; and members of the DOT Management Council, which include Mr. O. G. Stoner, Deputy Minister; Mr. G. A. Scott, Assistant Deputy Minister, Air; Mr. G. W. Stead, Assistant Deputy Minister, Marine; Mr. G. Sicotte, Assistant Deputy Minister, General; Mr. G. C. Tilley, Senior Finan-

cial Advisor; Mr. E. L. Hewson, Director, Transportation Policy & Research; Mr. Wm. F. Nelson, Director General, Personnel, and Mr. D. A. McDougal, Executive Assistant to the Deputy Minister (Secretary). Senior members of the Ministers' political staff also attend these meetings. In addition officers of varying levels from within the department will also be invited to attend and participate in decision when matters within their jurisdiction are discussed. It is expected that the Council, on occasion, will meet with officials from the Regions. From time to time, heads of the Crown Agencies which report to Parliament through Mr. Hellyer will be invited to attend when matters of common interest are on the agenda. In this way, the Council will serve as an important instrument of policy coordination for transportation matters.

In the coming months we hope to hear from members of the TC via this page.

## CONSEIL DES TRANSPORTS

# nouvel instrument de travail

La création du Conseil des transports, dont les membres paraissent dans la photo de la page précédente, constitue un jalon important dans les services administratifs du ministère des Transports. Le groupe se réunit chaque semaine, permettant ainsi au ministre Paul Hellyer et au ministre d'État James Richardson de maintenir un contact étroit et un dialogue continu avec les hauts fonctionnaires du ministère.

Un ministre, membre du Cabinet fédéral, doit répondre au Parlement des actions de son ministère et il doit également établir les politiques et lignes de conduite à suivre pour atteindre les objectifs visés par son ministère. Il est évident que dans un ministère aussi vaste que celui des Transports, avec ses ramifications dans les domaines de la marine et de l'aviation, cela entraîne des problèmes complexes au niveau de l'administration. Le dialogue au sommet demeure le meilleur moyen d'aborder ces problèmes.

Les politiques et lignes de conduite établies par le ministre sont-elles suivies efficacement, non seulement à l'adminis-

tration centrale d'Ottawa, mais aussi et peut-être plus particulièrement au niveau régional? Le ministre est-il au courant des traquenards, actuels et possibles, qui peuvent se trouver entre la ligne de conduite et son application? De plus, les ministres responsables ont-ils tous les renseignements qui leur permettent de prendre des décisions éclairées sur les problèmes courants et les projets à l'étude?

Voilà le genre de questions qui seront discutées lors des réunions hebdomadaires du Conseil des transports dans la salle des réunions, au 7<sup>e</sup> étage de l'immeuble Hunter. Les membres du Conseil sont le ministre des Transports, M. Hellyer; le ministre d'État, M. James Richardson; et les membres du Conseil d'administration du ministère comprenant M. O. G. Stoner, sous-ministre; M. G. A. Scott, sous-ministre adjoint pour l'Air; M. G. W. Stead, sous-ministre adjoint pour la Marine; M. G. Sicotte, sous-ministre adjoint à la direction générale; M. G. C. Tilley, conseiller financier ministériel; M. E. L. Hewson, directeur des méthodes et

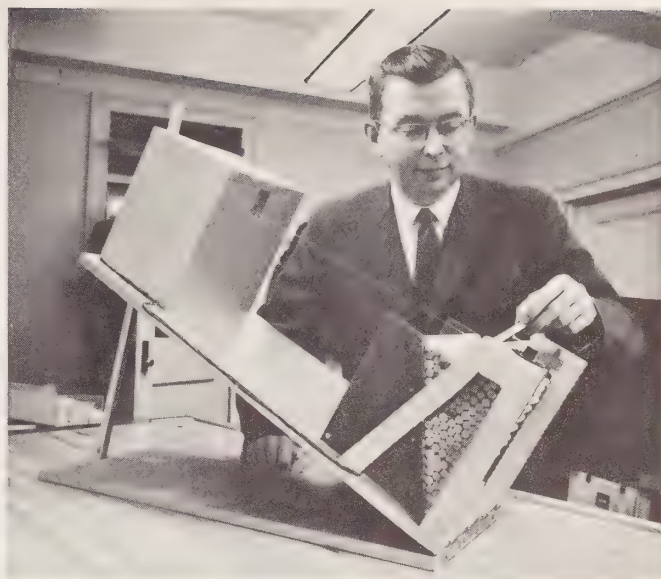
des recherches en matière de transport; M. Wm. F. Nelson, directeur général du personnel; et M. D. A. McDougal, chef de cabinet du sous-ministre. Des conseillers attachés aux bureaux des deux ministres assisteront aussi aux réunions. De plus, d'autres fonctionnaires à divers niveaux de l'administration seront invités à l'occasion à prendre part à des discussions sur des sujets relevant de leur compétence.

On prévoit également que le Conseil, à l'occasion, s'entretiendra avec les représentants au niveau régional. De temps en temps, les dirigeants de sociétés de la Couronne répondant au Parlement par l'entremise de M. Hellyer seront aussi invités aux réunions lorsqu'on y discutera de questions d'intérêt commun. De cette façon, le Conseil agira en fait comme instrument de coordination des politiques en matière de transport.

Au cours des mois à venir, cette page sera ouverte aux membres du Conseil qui auront un message à transmettre à nos lecteurs.



**SPECIAL ASSEMBLY**—Gordon W. Stead, Assistant Deputy Minister, Marine, left, and Captain John MacAngus are shown representing Canada at the special Assembly of IMCO late last year.



**TESTING STRESSES**—Captain John MacAngus checks device developed by D.O.T. for testing stresses on deck cargoes of timber. The angle of the "deck" can be altered and a scale in the box at the upper end registers the stress exerted by the load on its fastenings at different angles of slant.

## New plan for grain shipments

An alternative to the current rules governing the sea shipment of grain was approved recently by the Maritime Safety Committee of the Inter-governmental Maritime Consultative Organization (IMCO), which met in London, England at the end of February. It calls for the ship itself to provide the degree of stability necessary for safety, without necessarily having the currently-required wooden construction in the holds.

Canada, which is represented by the Department of Transport at these meetings, is interested in this plan which could save a good deal of money and cut the cost of shipping our grain. It is anxious, however, to see the new method evaluated in actual sea conditions before accepting it as a practical solution and the committee agreed with our delegates on this point.

This was one of a number of resolutions which Canada helped formulate that will change international rules affecting transportation by sea.

The Canadian delegation consisted of John Birtwhistle, deputy chairman of the Board of Steamship Inspection, Captain J. L. MacAngus, the Department's IMCO co-ordinator, and a London-based officer from the Department of External Affairs.

Gordon W. Stead, Assistant Deputy

Minister, Marine for several years has led the Canadian delegation to IMCO's senior conference, the Assembly, which met late last year. The principal task of that session was to adopt a number of recommendations to help prevent disasters such as that of the tanker *Torrey Canyon*, which flooded British and European beaches with oil; to quickly control any such pollution which may occur, and to set a procedure for collecting damages.

Another project, initiated by Canada, is a current study by a committee led by Mr. Stead to identify the aims of IMCO's administrative body and to ensure that each dollar contributed by a member state is used to give a dollar's value.

It has been said that of all the varied activities of the United Nations family of organizations IMCO is considered to be a bargain when the cost is balanced against the output measured in solid binding agreements between states working together for the benefit of the shipping industry and world trade.

The Maritime Safety Committee provides the technical work, which is the backbone of this hard-working organization. It was this committee which met in February.

One of Canada's proposals, which the

committee accepted, was that a study be made toward setting new international rules for deck cargoes of timber. Current regulations have been unchanged since 1930. They still are suitable for the Baltic trade, where ships are much the same size as they were in the 1930's but now Canada has giant ships carrying as much on deck as the total cargo of a Baltic ship. When cables and other securing devices fail to take the strain, deck cargoes may break away, resulting in heavy loss and endangering both ship and crew.

D.O.T. already has done some research on the stresses which must be considered in securing lumber deck cargoes, and our delegates sought a full-scale international debate on ways to keep lumber ships safe.

Another matter of special interest to Canada was a study on the safety of fishing vessels far from home. It is concerned largely with facilities provided by "mother ships", which carry supplies and offer hospital and other services to the fleets they accompany. A great gathering place for these fleets is the Grand Banks, off the shores of Newfoundland. Canada, which has no such long-ranging fleets, frequently provides emergency services to various nationalities of vessels off our shores through the Canadian Coast Guard and a search and rescue network.





**TRANS - CANADA MANAGEMENT** — Gordon W. Stead, Assistant Deputy Minister, Marine, chats with his regional directors, Frank Weston, right, from Dartmouth, N.S., and Herb Buchanan from Vancouver, B.C.

**AU PIED DE LA COLLINE**—Sous un tableau illustrant la colline parlementaire d'Ottawa, le sous-ministre adjoint à la marine, M. Gordon W. Stead, s'entretient avec deux directeurs régionaux des Services de la marine, M. Frank Weston, à droite, de Dartmouth, N.-E., et M. Herb Buchanan, de Vancouver, C.-B.

## Looking at development of Marine Services

Debates were lively in Ottawa's new Skyline hotel recently when senior members of Marine Services regional staff gathered from across Canada to take a good look at how the organization has developed in the past 10 years. They also responded to requests for advice on what was still wrong with it and how its shortcomings could be overcome.

Branch directors and other senior headquarters personnel addressed the week-long conference of regional directors, district managers and district marine agents.

Assistant Deputy Minister, Marine Gordon W. Stead presided over all sessions of the conference, the first in three years. Its purpose, he said, was for the regional staff to review the significant events which had been brought about on a number of fronts, and to take note that participatory management and decision-making have become the order of the day.

Mr. Stead opened the conference with an informal review of major events in the reorganization of Marine Services during the 10 years since he took office. These included the formation and development of the Canadian Coast Guard and expansion of its services, especially the increasing icebreaker work which is opening up the Arctic to shipping and assisting an increasing volume of winter shipping.

He noted that the Harbours and Property Division, organized during this period, now operates harbours through which 70 per cent of Canada's marine traffic passes. Another of several events noted was the creation of a modern marine traffic control system for the St. Lawrence ship channel. This system, he said, has put us one step ahead of any other country in the world.

### Delegation of responsibilities

Discussions and debates which interspersed formal presentations on departmental objectives and operations were frequently concerned with the increasing delegation of responsibilities for management decision and budget control. The implications for management in collective bargaining also were well worked over.

Some of the topics provided ready-made articles for future use in the magazine.

They included the use of planning, programming and budgeting concepts as a tool of management, as set out by Lloyd Worrall, Director Finance, Marine. This covered the current system of financial management, program review and estimates as set down by the Treasury Board.

The changing requirements of navigational aids were discussed by J. N. Ballinger, Chief of Aids to Navigation. He described research and trends in the

types and servicing of navigational lights and emphasized the department's responsibility to ensure that they are effective and accurate.

### Arctic operations

A. H. G. Storrs, Director of Operations, told of the department's increasing involvement with Arctic operations. In addition to annual supply operations, navigation probes and scientific expeditions, it will take part in tests which may result in huge oil tankers passing regularly through the Arctic all year round.

Other presentations and discussions concerned experimental ice booms, hydraulic model studies, the possible application of inflated dams for ice control, icebreaking and ice abatement experiments.

In summation, Mr. Stead said that the conference had met its main objectives. Participants had been expected to note the numerous developments under way but not yet completed, to see the various "loose ends" and assist headquarters in tying them together. Above all, they were to take note of management's ideas and its willingness to consider new proposals.

Mr. Stead quoted one field officer, who obviously got the message: "All the minds are open. There are no sacred cows anymore."

**PLACE AU FRANÇAIS**—De gauche à droite, MM. Walter Manning, directeur des travaux maritimes, William P. O'Malley, chef de la Division du chenal maritime du Saint-Laurent, G. W. Stead, sous-ministre adjoint à la marine, et le capitaine George Leask, chef du service du contrôle de la circulation maritime, s'adonnent à une conversation dans la langue de Molière. Un nom peut parfois être trompeur: MM. Manning et O'Malley sont d'origine québécoise et parlent couramment les deux langues. Les deux autres sont d'expression anglaise d'abord mais maîtrisent le français avec aisance.

**WHAT'S IN A NAME?**—Engaged in conversation "en français" are, left to right, Walter Manning, Director of Marine Works; William P. O'Malley, chief engineer, St. Lawrence Ship Channel; G. W. Stead, Assistant Deputy Minister, Marine, and Captain George Leask, Chief, Marine Traffic Control.



## Services de la marine

# Une rencontre qui devrait porter fruits

Une rencontre récente, groupant à Ottawa les hauts fonctionnaires des Services de la marine, administration dont les ramifications s'étendent d'un bout à l'autre du pays, a donné lieu à de vifs débats, certes un indice de l'intérêt et de l'enthousiasme apportés aux choses de la marine au sein du ministère. La réunion avait pour but de passer en revue les accomplissements des dix dernières années, déceler et chercher à corriger les faiblesses de l'organisation, étudier les problèmes courants et enfin discuter les projets d'expansion du service.

Les directeurs des divers services et autres spécialistes attachés à l'Administration centrale, à Ottawa, ont pris la parole au cours de la rencontre d'une semaine groupant à l'hôtel Skyline les agents maritimes locaux et directeurs régionaux venus de tous les coins du pays.

Le sous-ministre adjoint à la marine, M. Gordon W. Stead, a présidé chacune des séances d'étude. «Le but de cette rencontre, a-t-il dit, est de permettre au personnel au niveau régional de passer en revue les principaux événements des dernières années et de noter surtout l'importance pour chacun d'apporter sa contribution et de participer enfin activement aux décisions sur le plan administratif.»

M. Stead a inauguré les séances d'étude en rappelant brièvement les accomplissements du service pendant la période de réorganisation sous sa gouverne, soit au cours des dix dernières années. Faisant allusion aux origines de la Garde côtière

comme telle, il a parlé de l'expansion de ce service en insistant particulièrement sur le rôle des brise-glaces comme aide à la navigation d'hiver ainsi que sur leur contribution au développement de l'Arctique.

Il a noté que la Division des ports et des biens, nouveau service créé au cours de ces dix ans, administre présentement des ports qui accueillent 70 pour cent du commerce maritime au pays. Par ailleurs, le régime de contrôle de la circulation maritime, en vigueur depuis quelques années déjà dans le Saint-Laurent et les eaux adjacentes, place le Canada au premier rang dans ce domaine.

Les discussions et débats suivant les exposés de spécialistes et directeurs de services ont fréquemment porté sur l'étendue des responsabilités maintenant dévolues aux échelons inférieurs particulièrement en ce qui concerne les décisions administratives et le contrôle du budget. On a également étudié à fond les implications et les effets de la convention collective au niveau de l'administration.

Certains des sujets abordés feront l'objet d'articles qu'on se propose de faire paraître dans la revue au cours des mois à venir.

Un sujet d'intérêt particulier a trait aux nouveaux concepts appliqués à la planification, à l'élaboration de programmes et aux prévisions budgétaires. Un exposé sur le sujet par le directeur des finances à la marine, M. Lloyd Worrall, a donné un aperçu des nouvelles méthodes

et procédures établies par le Conseil du trésor.

Le chef du service des aides à la navigation, M. J. N. Ballinger, a parlé des responsabilités du ministère face aux nouvelles exigences dans le domaine de la navigation. De son côté, le directeur des opérations de la marine, M. A. H. G. Storrs, a insisté sur le rôle joué par la Garde côtière dans l'Arctique. En plus d'assurer le ravitaillement des postes éloignés du Grand Nord, la Garde côtière participe en effet activement aux diverses expertises et recherches scientifiques qui pourraient ouvrir, à l'année longue, les voies navigables de l'Arctique au passage de pétroliers.

Les discussions ont également porté sur diverses autres initiatives des services, dont, entre autres, les estacades servant à retenir les glaces, les études hydrauliques sur modèles, l'adoption possible de barrages gonflés d'air pour le contrôle des glaces ainsi que sur les méthodes de briser la glace et autres expertises du genre.

En conclusion, M. Stead s'est dit convaincu que la rencontre avait atteint ses objectifs. Ce qui importe le plus peut-être, a-t-il dit, c'est que chacun a pu constater combien l'administration est ouverte aux idées nouvelles et disposée à poursuivre et intensifier le dialogue sur tous les aspects du service. Comme l'a exprimé un délégué: «Les esprits sont ouverts. C'est comme une trouée dans la tour d'ivoire!»



# La lutte contre les glaces,



## besogne de tous les jours

par EDOUARD DESLAURIERS  
Services d'information

Peu importe les saisons, la lutte contre les glaces est un travail qui se poursuit à l'année longue dans les eaux navigables du Canada, que ce soit dans l'Arctique durant l'été ou dans le Saint-Laurent pendant l'hiver. C'est un problème auquel les premiers explorateurs ont eu à faire face à leur arrivée au pays, et il demeure encore avec nous aujourd'hui, plus de quatre cents ans plus tard.

Bien sûr, au cours des années, et après des études approfondies du sujet, on a perfectionné certaines méthodes qui nous permettent de maîtriser en quelque sorte la nature et qui laissent entrevoir le jour où l'on se rendra enfin maître des glaces. Il reste évidemment de nombreuses difficultés à surmonter, et la lutte demeure engagée.

Le problème des glaces constitue, de fait, l'une des principales préoccupations du ministère des Transports qui compte une main-d'œuvre hautement spécialisée

s'adonnant à d'intenses recherches sur le sujet. Le ministère possède de plus une flotte d'une vingtaine de brise-glaces, dont les plus lourds, soit le *John A. Macdonald*, le *d'Iberville*, le *Labrador*, le *N.B. McLean*, le *Camsell*, le *Montcalm*, le *Wolfe*, le *Sir Humphrey Gilbert*, le *Ernest Lapointe* et le *C. D. Howe* abattent une lourde besogne dans le fleuve et le golfe Saint-Laurent de même que dans les eaux côtières de l'est et de l'ouest ainsi que dans l'Arctique.

Bien entendu, les glaces ne constituent pas seulement une entrave à la navigation. Elles sont encore la cause de graves inondations, particulièrement sur les terres basses longeant le fleuve Saint-Laurent entre Trois-Rivières et Montréal.

Au ministère des Transports, au Conseil national des recherches, au ministère de l'Énergie, des Mines et des Ressources, dans nos universités et même dans l'entreprise privée, des équipes de spécialistes

sont penchées sur ce problème aujourd'hui. On étudie la physique des glaces, sa formation, son comportement et les effets de ses déplacements. Ces études ont toutes pour but évidemment de permettre à l'être humain de mieux s'adapter à son milieu et de lui donner enfin les moyens de subjuguer ou maîtriser, si l'on veut, un phénomène naturel qui peut nous paraître pour le moins rébarbatif.

Un certain nombre de ces spécialistes des glaces, soucieux d'approfondir leurs connaissances du sujet, se sont réunis en janvier dernier à bord d'un navire du ministère chargé précisément de briser un embâcle dans le fleuve Saint-Laurent, aux environs de Sorel.

Cette rencontre, une initiative de M. William P. O'Malley, chef de la Division du chenal maritime du ministère, a eu lieu à bord du *d'Iberville*. Elle groupait, entre autres, la délégation du chenal maritime dirigée par M. O'Malley et



**SPÉCIALISTES DES GLACES EN DISCUSSIONS**—La rencontre, groupant des représentants de certaines universités et de divers ministères, s'est déroulée dans un salon à bord du d'Iberville. On reconnaît le chef de la Division du chenal maritime, M. William P. O'Malley, sous l'éventail accroché au mur de la pièce.

**SEMINAR ON ICEBREAKING METHODS**—Canadian experts conducting scientific research on ice conditions in our waterways met in January on board the Coast Guard icebreaker d'Iberville. In attendance were engineers of the St. Lawrence Ship Channel Division, Montreal, the National Research Council, the Department of Defence Production, the Department of Energy, Mines and Resources as well as representatives of Laval and McGill Universities.

comprenant les ingénieurs Marcel Piché et Laurent Simard, de Montréal, M. Michael McDonald, ingénieur du bureau de Cornwall, et M. Victor Cardin; deux spécialistes du Conseil national des recherches, MM. Lorne Gold et N. Krausz; un représentant de l'Université McGill M. P. Langleben; trois chercheurs de l'Université Laval, MM. René Ramsier, Marc Drouin et D. Carter; un représentant du ministère de l'Énergie, des Mines et des Ressources, M. L. Colby, attaché à l'Étude du plateau continental polaire; ainsi que deux ingénieurs de la Direction de la construction navale au ministère de la Production de défense, MM. John Reid et R. Murdie.

Pendant plusieurs heures, le groupe s'est abîmé dans de profondes discussions sur tous les aspects du problème des glaces. On a d'abord passé en revue les méthodes employées pour briser la glace afin d'en déterminer leur efficacité. Puis, la discussion a porté pour un temps sur

les moyens de disposer de la glace après le bris, particulièrement dans certaines sections du fleuve Saint-Laurent où le courant n'est pas assez rapide pour emporter la glace broyée sous le poids des navires. Le groupe a d'ailleurs pu évaluer sur place le comportement d'un navire dans la glace quand le d'Iberville s'est attaqué à l'embâche aux environs de Sorel.

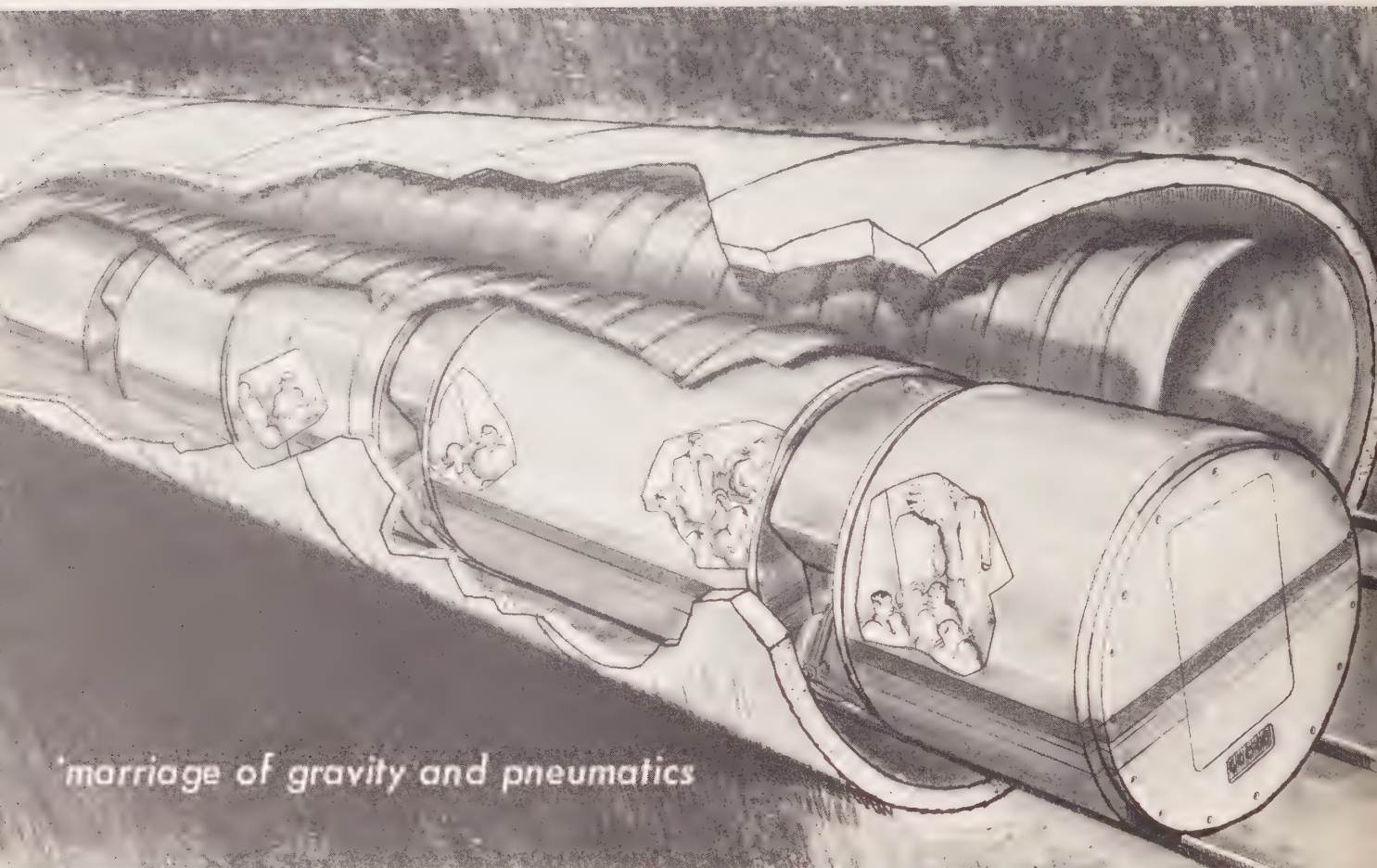
A l'endroit où s'était formé l'embâche, dans le lac Saint-Pierre, le courant est particulièrement lent. Le navire, à toute vapeur, fonçait dans cet amoncellement de glace qui atteignait à certains endroits une profondeur d'une quinzaine de pieds. Après avoir ainsi parcouru une soixantaine de verges dans ce champ de glace, le navire devait revenir sur ses pas et donner une nouvelle charge de cinquante ou soixante verges. Et, chaque fois, on voyait les immenses blocs de glace détachés de l'embâche s'entassant dans le sillon laissé au passage du navire. «C'est là le problè-

me, nous soulignait M. Marcel Piché. Si le courant était plus rapide ou s'il y avait moyen de pulvéfiser ou de faire fondre cette glace que nous brisons au passage des navires, on aura mis fin aux embâches. On n'aurait pas non plus à déplorer des inondations comme celles qui, en janvier 1967, ont causé des dégâts considérables, particulièrement dans cette même région de Sorel.»

La rencontre à bord du d'Iberville n'a pas apporté de solutions au problème, mais elle a quand même permis aux spécialistes d'exposer leurs points de vue et de partager ainsi leurs connaissances du sujet. En plus de créer un climat favorisant davantage la recherche de solutions au problème, un tel échange de vues ne peut qu'encourager et stimuler l'effort concerté nécessaire dans la lutte engagée contre un élément de la nature qui constitue actuellement un des grands obstacles au commerce maritime chez nous.



# Underground transportation system of tomorrow



by A. VICTOR BUSHE  
Information Services Division

*Lawrence K. Edwards, president of Tube Transit Corporation, Palo Alto, California, headed a group of top-notch aerospace engineers which hatched the GVT system in mid-1965 at Lockheed Missile and Space Co. When Lockheed decided against entering the ground transportation field, Edwards obtained the rights to the system and set out to get U.S. government financing for a prototype to test its feasibility.*

A ground transportation system, which its developer, Lawrence K. Edwards, claims can carry passengers at speeds in the 300 mph range nearly half a mile below ground and whisk urban dwellers under metropolitan areas, was the subject of a seminar conducted by Mr. Edwards in Ottawa in February.

The seminar was sponsored by the Policy and Research Branch of the federal Department of Transport as part of a continuing interest in high-speed ground transportation.

As the name of this transportation system implies, Gravity Vacuum Transit (GVT) employs gravity and vacuum to propel trains at enormous speeds through a pair of underground steel tubes imbedded in underground tunnels. These tubes are evacuated by electrically-powered pumps or compressors located near the stations. The cylindrical, pressure-tight trains are accelerated and decelerated by gravity and atmospheric air pressure.

## Developer's claim

Mr. Edwards claims that GVT is capable of speeds roughly twice the limit for any other system, existing or proposed. He claims also that the system would be much cheaper to build and operate.

At the two-day seminar, attended by specialists from the Department of Transport, universities, consultants of C.N.R. and Toronto Transit Commission, and other government agencies, Mr. Edwards described the physical principles employed in GVT, and with the aid of models showed how the tunnels, tubes, trains and other aspects of the system are operated.

## Immune to fog, snow

Mr. Edwards, who is an Associate Fellow of the American Institute of Aeronautics and Astronautics, said power demands are surprisingly low, partly due to the use of gravity and partly due to the recovery of pneumatic energy at each



**COMFORT OF AN AIRCRAFT**—This architect's drawing of the interior of GVT system train shows the seating to be much like present-day aircraft, but it will have only two seats on each side of the centre aisle. There is more aisle space than on aircraft, buses or trains, the developers say.

**UN DEMI-MILLE SOUS TERRE**—et à 300 milles à l'heure. C'est peut-être le moyen qu'on aura adopté au cours du siècle prochain pour déplacer les citadins dans nos régions métropolitaines surpeuplées de l'avenir. Les trains, propulsés par un système auquel on applique les principes de la gravité et du vacuum, circuleront à vive allure dans des tubes d'acier reposant sur le roc du sous-sol. Cette conception d'artiste nous fait voir l'intérieur du train affichant l'atmosphère de confort trouvée à bord des avions de l'époque moderne.



stop. The same phenomena avoid the need for massive brakes or other energy. Schedule reliability is enhanced by these same factors and by the system's immunity to fog, snow and temperature extremes.

The developers of GVT claim that two tubes in a single tunnel will permit two-way passenger movement equivalent in capacity to five to 15 lanes of freeway in each direction.

Another claim is that the capital cost of the GVT system would be much less than conventional subways, partly due to the compactness of the tunnel arrangement and partly due to the placement of the tunnels in bedrock, where tunneling costs have been shown to be a fraction of that for shallow tunnels in urban areas.

As regards operating costs, Mr. Edwards claims these too would be less than for conventional subways, primarily because doubling the trains' effective speed would permit half as many trains, and half as many train crews, to accomplish the same number of passenger trips per hour, with no change in waiting time between trains.

#### No air pollution

The American Society of Civil Engineers describes the system as one which "causes no air pollution and can be designed to generate very little noise. It minimizes surface disruption during its

construction, and can be routed under rivers, skyscrapers and consecrated land without condemnation or other controversy."

The developers say that virtually all technology for urban GVT is available today. There is no need for costly and time-consuming development of new power plants, power conduction methods, braking systems or substitutes for the wheel. Present-day deep tunneling techniques are entirely suitable, although research now underway may further reduce tunneling costs and thereby bring rapid transit within reach for scores of cities.

Distinguishing features of the GVT system are described by Mr. Edwards as follows:

- a. It employs gravity for roughly 2/3 of the total energy requirement and atmospheric air for the remaining 1/3. This appears to permit unprecedented reliability, safety and economy.
- b. By accelerating passengers in a fashion they cannot feel, it permits average speeds roughly twice the limit for any existing or presently proposed conventional transportation system. At any arbitrary acceleration comfort level, GVT permits effective speeds substantially higher than the theoretical limit for any horizontal transportation system.
- c. GVT satisfies the ideals of no air pollution or above-ground eyesores,

and virtually no environmental noise, no land severance or condemnation of land along the "right-of-way".

d. By placing its stations at depths typical for London's deep-tube subway system, GVT avoids the urban disruption that accompanies cut-and-cover construction. By employing a system-engineered configuration, it affords unusually generous passenger space and still permits an economical tunnel cross-section — slightly over half that of present transit tunnels.

Summarizing his claims for GVT, Mr. Edwards says: "Speaking as one who has spearheaded the preliminary design and systems engineering of more than one successful aerospace system of comparable cost and technical complexity, I assert that this is a low-risk undertaking — one that can be carried out without serious snags on cost, timescale or performance."

#### Problem areas

Discussion among the seminar participants was lively as each expert brought to light problem areas in development of a GVT system.

Questions such as the required linearity of alignment, difficulty of switching to branch lines, fail-safe tube valve mechanisms, braking accuracy without power, and a 1.5 inches vehicle-tube clearance at 300 mph showed the variety of research and development required for this system prior to its implementation.





**ACCUEIL À BORD**—Le traditionnel sourire aux lèvres, le premier ministre arrive à bord du d'Iberville. A ses côtés, de gauche à droite, on reconnaît le directeur du port de Québec, M. Paul Bousquet; l'agent maritime du ministère, M. Jean-Paul Godin, coiffé de la tuque du carnaval; le capitaine du navire, M. Marius Gagné; et Mlle Madeleine Bousquet, fille du directeur du port.

**MARINE WELCOME**—Prime Minister Trudeau is greeted by Paul Bousquet, director of the Port of Quebec; Jean Paul Godin, Quebec Marine Agent; Captain Marius Gagné, and Miss Madeleine Bousquet.

## Le premier ministre monte à bord

La Garde côtière canadienne n'a pas tous les jours l'occasion d'accueillir à bord d'un de ses navires un personnage aussi distingué que le premier ministre du pays. Lors donc de sa visite à bord du n.g.c.c. *d'Iberville* à l'occasion du Carnaval de Québec, en février dernier, M. Pierre Elliot Trudeau a dû certes noter l'enthousiasme que suscitait sa présence.

Son séjour à bord a été de courte durée—il y était pour donner le signal de départ de la course de canots du carnaval—mais il a quand même trouvé le temps de prendre le repas en compagnie du sous-ministre adjoint à la marine,

M. Gordon Stead, du capitaine du navire M. Marius Gagné, et d'autres dignitaires invités pour l'occasion. Il s'est même adonné à quelques pas de danse sur le pont du brise-glace en compagnie des jolies duchesses du carnaval avant de décoller par hélicoptère pour l'aéroport de Québec, d'où il s'est envolé pour Ottawa.

Le ministre des Forêts et du Développement rural, M. Jean Marchand, est venu rejoindre le premier ministre à bord. Du pont du navire, ils avaient un bon coup d'œil sur la course de canots. Ils étaient accompagnés, entre autres, de l'agent maritime du ministère à Québec,

M. Jean-Paul Godin; du directeur des travaux maritimes, M. Walter Manning; du directeur du port de Québec, M. Paul Bousquet; du maire de Québec, et de nombre d'autres personnalités de la région de Québec.

Chacun s'est particulièrement plu à signaler l'excellence du service accordé aux visiteurs. L'équipe responsable du service était dirigée par le préposé régional aux vivres, M. Marcel Blais. Elle se composait du commissaire Denis Pelletier, du chef des vivres Gaston Vigneault, des commis Gaston De Blois et Robert Langlois et, évidemment, des cuisiniers Jules Roy et Charles Falardeau.

# Gala event on CCGS d'Iberville



VIEW FROM THE BRIDGE—View of the Carnival canoe races from the bridge of the CCGS d'Iberville.

DÉPART DE LA COURSE—Cette photo a été prise du pont du d'Iberville au moment du départ de la course de canots.

It is not often that a Canadian Coast Guard Ship has on board such a distinguished visitor as the Prime Minister. It was therefore a gala occasion for the CCGS d'Iberville on the occasion of the Quebec Winter Carnival in February when Mr. Trudeau went on board.

It was a disappointment to the ship's captain and crew, however, that Mr. Trudeau's visit was such a short one—he was on board to officiate at the starting of the Carnival canoe races. Nevertheless, he did find time in his crowded schedule to have a meal on board in the company of the Assistant Deputy Minister, Marine, Gordon W. Stead, the ship's master, Captain Marius Gagne and other dignitaries invited for the occasion.

Before leaving by helicopter for Ottawa, the Prime Minister delayed his departure long enough to have a quick dance with the Carnival Duchesses, to the delight of all those on board.

Earlier the Minister of Forestry and Rural Development, Jean Marchand, had joined Mr. Trudeau on board the d'Iberville to watch the canoe races from the bridge. Also in the party were the Quebec Marine Agent, Jean Paul Godin, the Director of Marine Works with the Department of Transport, Walter Manning, the director of the Port of Quebec, Paul Bousquet, the Mayor of Quebec and other dignitaries in the Quebec area.



LET'S ALL DANCE—The Carnival Duchesses and "Bonhomme Carnaval" join the Prime Minister in a dance on deck.

ET MAINTENANT L'ON DANSE—En compagnie des duchesses et du Bonhomme Carnaval, le premier ministre y est allé de quelques tours de danse sur le pont du navire.



# Task force on departmental objectives

O. G. Stoner, Deputy Minister of Transport, announced on March 7 the formation of a task force to determine departmental objectives. The purpose of this task force is to examine the work already done by the Services in developing objectives and come up with a statement of departmental objectives.

This statement will not only serve as a starting point for a department-wide management by objectives program but it will endeavour to clarify the departmental role vis-a-vis those of other agencies engaged in transportation activities. It should serve as a starting point for the development of departmental plans which will delineate how objectives are to be achieved, the priorities for allocation of resources and the time frame for departmental goals.

The task force was expected to submit a report in about four months. The Deputy Minister is being closely associated with its work throughout this period. Co-chairmen of the study group are John Gratwick of Canadian National Railways, Montreal, and Arthur Bailey of Treasury Board, Ottawa. Dr. James Douglas Fleck, Associate Dean of the Faculty of Administrative Studies, York University, Toronto, is also a member.

Departmental representatives are F. L. Worrall representing Marine Services, D. G. Black representing Air Services, J. I. Carmichael representing Management Services and T. C. Porter representing Personnel.

The task force will work closely with the Management Council of the department. In addition to headquarters discussions, meetings with representatives of the Regions are also planned.

John Gratwick obtained his B.Sc. degree at King's College, London, England, following war service in the Royal Air Force. After two years in West Africa on a rural development project he worked in various capacities in the field of operational research for the RAF and subsequently the RCAF, which resulted in his moving to Canada permanently in 1958. He joined the CNR Operational Research Branch in 1960 and began his association with the Express Department in 1962 where he is now Senior Technical Advisor. In addition, he is associated with



Arthur Bailey  
Co-chairman—*président conjoint*

McGill's Faculty of Management and Department of Continuing Education.

Arthur Reginald Bailey graduated from the University of Toronto with a B.A. in political science and economics in 1948. He has held a number of senior government posts, including Planning Advisor to the Deputy Minister, Department of Defence Production, and Head Finance and Administration, Department of Industry. He was appointed to his present position as Organization Advisor to the Secretary of the Treasury Board in January 1969.

Dr. James Douglas Fleck obtained a B.A. from the University of Western Ontario in 1953, winning the Gold Medal in Business Administration. He received his Doctor of Business Administration from Harvard Business School in 1964.

Active in business on a full-time basis until 1960, Dr. Fleck is currently the President of The Colonial Homes Limited and a Director of Fleck Manufacturing (1959) Limited, Tilleck Manufacturing Limited and Zenith Electric Supply Limited.

Dr. Fleck lectured on business administration at the Harvard Business School, University of Western Ontario, the World Bank and the Cours de Perfectionnement en Administration de l'Ecole des Hautes

Etudes Commerciales. Also, he has served as a Visiting Professor at INSEAD, the European Institute of Business Administration, in Fontainebleau, France, and at Keio Business School, Keio University, Tokyo, Japan. At present he is Professor and Associate Dean of the Faculty of Administrative Studies, York University, Toronto.

F. Lloyd Worrall received a chartered accountant degree from McGill University in 1950. He was a director of a number of industrial concerns and he was employed by various accounting firms before joining the Department of Transport in 1965. He is presently serving as Director of Finance, Marine.

Donald G. Black obtained his B.A. from Queen's University and he served for many years on secondment to the RCAF as Staff Officer Meteorology at Training Command Headquarters. In 1966 he was awarded the Patterson Medal for his contribution to Canadian meteorology. Since joining the Training and Development Division in 1964 he has been closely associated with the development of the Senior Management training program and with the Management by Objectives program in Air Services. He was appointed Chief of Training and Development in early 1968.

James I. Carmichael attended Queen's University where he obtained a B.Sc. degree in mechanical engineering. He is a 1968 graduate of the National Defence College Course. He has had extensive industrial experience in production engineering, general management and engineering consulting. While serving as a senior consultant with P. S. Ross and Partners of Toronto he did consulting work for the Glassco Commission. He received his present appointment as Director Management Services in 1964.

Terence C. Porter attended Sir George Williams University while serving in the RCAF from 1939-1961. While in the RCAF he was concerned with the design and implementation of management systems, with the analysis of organization structure and manning requirements. He was serving as Director of a Staffing Program at the Public Service Commission in July 1968, when he was appointed to his present position as Director Manpower Planning and Organization.

# Groupe d'étude sur les objectifs du ministère

Le sous-ministre des Transports, M. O. G. Stoner, a annoncé, le 7 mars dernier, la création d'un groupe d'étude qui aura pour tâche d'établir les objectifs du ministère. Le groupe passera d'abord en revue le travail déjà accompli par les divers services dans l'élaboration de leurs propres objectifs puis énoncera les grandes lignes ayant trait aux objectifs ministériels.

Cet énoncé d'objectifs ne constituera pas uniquement le point de départ d'un programme administratif s'appliquant au ministère seulement, mais il servira aussi à préciser davantage le rôle du ministère face aux objectifs d'autres agences ou services engagés dans le domaine des transports.

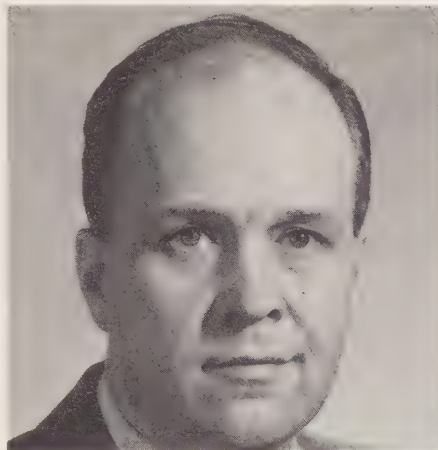
Cette étude permettra de jeter les bases d'un plan d'ensemble indiquant les moyens d'atteindre les objectifs visés, les priorités quant à l'attribution des ressources disponibles et le temps à mettre à l'accomplissement des tâches.

Le groupe d'étude doit soumettre son rapport d'ici quelques mois. Le sous-ministre s'intéresse activement à la marche des travaux. Les co-présidents du groupe sont MM. John Gratwick, du Canadien National, Montréal, et Arthur Bailey, du Conseil du trésor, Ottawa. M. James Douglas Fleck, doyen associé de la Faculté des études administratives de l'Université York, de Toronto, en fait également partie.

Les représentants du ministère sont MM. F. L. Worrall, des Services de la marine, D. G. Black, des Services de l'Air, J. I. Carmichael, des Services de gestion, et T. C. Porter, du Personnel.

Le groupe travaillera en étroite collaboration avec le Conseil d'administration du ministère. En plus des entretiens à l'Administration centrale, des réunions au niveau régional sont également prévues.

M. John Gratwick a obtenu son baccalauréat ès sciences du King's College de Londres, après avoir accompli pendant la guerre du service dans la Royal Air Force. Après avoir passé deux années en Afrique occidentale où il s'occupait d'un projet d'aménagement rural, il a exercé diverses fonctions dans le domaine de la recherche opérationnelle pour le compte de la RAF et, par la suite, pour celui de l'ARC, travail qui le décida à s'établir en permanence au Canada, en 1958. Il devint membre du personnel de la Direction des recherches opérationnelles des chemins de fer Nationaux du Canada, en



John Gratwick  
Co-chairman—président conjoint

1960, et en 1962 du Service des messageries, dont il est maintenant le principal conseiller technique. Il est, de plus, associé à la Faculté d'études administratives et au Département d'éducation permanente de l'Université McGill.

M. Arthur Reginald Bailey reçut, en 1948, un baccalauréat ès arts avec mentions en sciences politiques et en économie de l'Université de Toronto. Il a occupé un certain nombre de postes importants au gouvernement, y compris celui de conseiller en planification du sous-ministre, au ministère de la Production de défense, et celui de chef de la division des finances et de l'administration, au ministère de l'Industrie. Il a été nommé à son poste actuel de conseiller en organisation auprès du secrétaire du Conseil du Trésor, en janvier 1969.

M. James Douglas Fleck a reçu un baccalauréat ès arts de l'Université Western Ontario, en 1953, et mérita alors la médaille d'or en administration d'affaires. Il reçut un doctorat en administration d'affaires de l'école d'administration d'affaires de Harvard, en 1964.

M. Fleck s'est consacré uniquement au monde des affaires jusqu'en 1960. Il est président de Colonial Homes Limited et directeur de Fleck Manufacturing (1959) Limited, de Tilleck Manufacturing Limited et de Zenith Electric Supply Limited.

M. Fleck a fait des conférences sur l'administration d'affaires à l'école d'administration d'affaires de Harvard, à l'Université Western Ontario, à la Banque mondiale et au cours de perfectionnement en administration de l'École des hautes études commerciales. Il a également donné des cours en qualité de pro-

fesseur invité à l'INSEAD, l'Institut européen de gestion des affaires à Fontainebleau, France, et à la Keio Business School, Université de Keio, Tokyo, Japon. Il est actuellement professeur et doyen adjoint de la Faculté des études administratives à l'Université York, à Toronto.

M. F. Lloyd Worrall obtint son diplôme d'expert-comptable à l'Université McGill en 1950. Il fut membre du conseil d'administration d'un certain nombre d'entreprises industrielles et fut employé par divers bureaux de comptabilité avant d'entrer au ministère des Transports en 1965. Il occupe actuellement le poste de directeur financier pour la Marine.

M. Donald G. Black obtint son baccalauréat à l'Université Queen's et il fut détaché pendant de nombreuses années au Corps d'aviation royal canadien en qualité d'officier d'état-major à la météorologie, au quartier général de la région aérienne d'entraînement. En 1966, la médaille Patterson lui fut décernée pour son apport à la météorologie canadienne. Depuis qu'il est entré à la Division de la formation et du perfectionnement en 1964, il fut étroitement associé à la mise au point du programme de formation des cadres et au programme de gestion par objectifs des Services de l'Air. Il fut nommé chef de la Division de la formation et du perfectionnement au début de 1968.

M. James I. Carmichael a suivi les cours de l'Université Queen's d'où il est sorti avec un baccalauréat en génie mécanique. En 1968, il a reçu le diplôme du Collège de la Défense nationale. Il a acquis une très vaste expérience dans l'industrie à titre d'ingénieur à la production, d'ingénieur-conseil, ainsi qu'au niveau de la Direction générale. Alors qu'il était principal ingénieur-conseil auprès de P. S. Ross & Partners de Toronto, il a été conseiller auprès de la Commission Glassco. Il a été nommé à son poste actuel de Directeur des Services de gestion en 1964.

M. Terence C. Porter a fréquenté l'Université Sir George Williams alors qu'il faisait partie de l'ARC de 1939 à 1961. Alors qu'il était à l'ARC, il s'occupait de l'étude et de l'application de systèmes de gestion, de l'analyse de la structure d'organisation et des besoins en personnel. Il occupait le poste de Directeur d'un programme de recrutement de la Commission de la Fonction publique en juin 1968, lorsqu'il a été nommé à son poste actuel de Directeur de la planification et de l'organisation de la main-d'œuvre.



# It's active duty for Coast Guard College graduates

# A la Garde côtière canadienne Le collège acclame ses premiers diplômés

The Canadian Coast Guard College, Sydney, N.S., officially opened in September 1965, is turning out its first group of graduates this month. Nineteen full-fledged officers, trained at the College over the past four years, are now ready for active duty with the Canadian Coast Guard.

The graduating officer cadets are to be honoured at a special ceremony at the College on May 31. It is expected that Transport Minister Paul Hellyer, Deputy Minister O. G. Stoner, Assistant Deputy Minister, Marine, Gordon W. Stead, the Director of Marine Operations, A. H. G. Storrs, and other senior officials of the department as well as the parents of the cadets and friends of the College will be on hand for the event.

In a personal message of congratulations to the graduates, Transport Minister Hellyer states that he is "particularly proud of this group of graduates whose high standards of achievement have established the bench-mark and the inspiration for future classes of cadets".

The Minister also extends his congratulations to the many people in the Department of Transport whose vision, imagination, patience and effort have made this event possible.

To the graduates, the Minister adds that he will follow their careers with particular interest and with confidence. "No matter what the future may hold," he says, "each one of the class of this momentous year can achieve fulfilment and satisfaction in one of the most interesting of all the fields now open to young Canadians."

The graduating class is composed of twelve navigation officers and seven marine engineers. The navigation officers are James George Calvesbert, Brantford (Ontario); J. Alain Canuel, Ste-Foy (P.Q.); James Jean-Paul Drolet, Quebec (P.Q.); Frederick William Guse, Regina (Sask.); Philip Arthur Irons, Abbotsford (B.C.); Paul Gregor Kavanagh, Glace Bay (N.S.); Jean-Lionel Maillette, Trois-Rivières (P.Q.); Mark Curtis Purney, Cowichan Bay (B.C.); Barrie William Robertson, Toronto (Ontario); Donald Kemp Ross, St. Peters, Cape Breton (N.S.); Henry Roger Southin, Ladysmith (B.C.), and Richard Chapman Theedom, Red Deer (Alberta). The marine engineering officers are Frederick James Andrews, Nipawin (Sask.); Brian Thomas Baillie, New Westminster (B.C.); Roy Lewis Bambury, Halifax (N.S.); Russell Buick, Camp Shilo (Man.); Alexis Fernandez, Montreal (P.Q.); Charles Clark Norris, Cooksville, (Ontario), and David George Parkes, Quebec (P.Q.).

*At the time of going to press, we learned that one of the graduating officer cadets, Mark Curtis Purney, 22, of Cowichan Bay, B.C., had been drowned in the wreck of a private schooner. He will be remembered as one of the most promising and popular cadets in his class.*



Captain Gerard L. Brie  
le directeur du Collège  
director of the College

Après quatre ans de formation au Collège de la Garde côtière canadienne, à Sydney, en Nouvelle-Écosse, les premiers diplômés quittent l'institution, ce mois-ci, pour assumer leurs nouvelles responsabilités au service de la Garde côtière. Le collège a été inauguré en septembre 1965.

Les dix-neuf nouveaux officiers recevront leurs diplômes à la collation des grades qui aura lieu au collège le 31 mai. On prévoit que le ministre des Transports, l'hon. Paul Hellyer, ainsi que le sous-ministre O. G. Stoner, le sous-ministre adjoint à la marine, M. Gordon W. Stead, le directeur des opérations de la marine, M. A. H. G. Storrs, et d'autres hauts fonctionnaires du ministère assisteront à cette cérémonie. Les parents des diplômés et les amis du collège seront également de la fête.

Dans un message de félicitations aux diplômés, le ministre Hellyer déclare qu'il est particulièrement fier des succès remportés par cette classe d'étudiants, dont les hautes normes atteintes serviront de modèles et d'inspiration pour les futures classes d'élèves-officiers.

Le ministre adresse également ses félicitations à tous ceux du ministère dont la perspicacité, l'imagination, la patience et les efforts ont rendu cet événement possible.

Le ministre ajoute enfin qu'il suivra avec un intérêt particulier la carrière des jeunes diplômés. «Peu importe ce que nous réserve l'avenir, dit-il, chacun de ces nouveaux officiers pourra atteindre à l'épanouissement et à la satisfaction dans un des plus intéressants domaines aujourd'hui accessibles aux jeunes Canadiens.»

Cette première classe de diplômés compte douze officiers de navigation et sept officiers-mécaniciens. Les officiers de navigation sont James George Calvesbert, de Brantford (Ontario); J. Alain Canuel, de Ste-Foy (P.Q.); James Jean-Paul Drolet, de Québec (P.Q.); Frederick William Guse, de Regina (Sask.); Philip Arthur Irons, d'Abbotsford (C.-B.); Paul Gregor Kavanagh, de Glace Bay (N.-É.); Jean-Lionel Maillette, de Trois-Rivières (P.Q.); Mark Curtis Purney, de Cowichan Bay (C.-B.); Barrie William Robertson, de Toronto (Ontario); Donald Kemp Ross, de St. Pierre, Cap Breton (N.-É.); Henry Roger Southin, de Ladysmith (C.-B.); et Richard Chapman Theedom, de Red Deer (Alberta). Les officiers-mécaniciens sont Frederick James Andrews, de Nipawin (Sask.); Brian Thomas Baillie, de New Westminster (C.-B.); Roy Lewis Bambury, de Halifax (N.-É.); Russell Buick, de Camp Shilo (Man.); Alexis Fernandez, de Montréal (P.Q.); Charles Clark Norris, de Cooksville (Ontario); et David George Parkes, de Québec (P.Q.).

*Au moment d'aller sous presse, on apprend qu'un des diplômés, Mark Curtis Purney, 22 ans, de Cowichan Bay, C.-B., a perdu la vie dans l'échouement d'une goélette. Il était un des plus brillants et populaires élèves-officiers de sa classe.*



# Un coup d'oeil suffit

par EDOUARD DESLAURIERS  
Services d'information

«C'est simple. . . Il s'agissait d'y penser!» Voilà l'attitude qu'adopte M. Gaétan Gauthier, officier budgétaire de la Division du chenal maritime du Saint-Laurent, à Montréal, qui vient de compléter l'aménagement d'un centre d'information visuelle unique en son genre dans les services du ministère des Transports.

Ce centre d'information se compose de trois vastes tableaux renfermant toutes les données se rapportant à l'administration des divers services du chenal du Saint-Laurent et de la Direction de l'hydraulique maritime. Ainsi, d'un simple coup d'œil, on a une vue d'ensemble de tout le rouage administratif y compris l'étendue du territoire desservi par la Division, les noms des membres du personnel, la liste des navires, les prévisions budgétaires de chaque service, les travaux en cours, le coût de ces travaux, l'état des dépenses de mois en mois et que sais-je encore.

Les tableaux sont jonchés de jetons aux formes et couleurs les plus variées, chacun représentant une personne, un service ou une phase de l'opération. Ces jetons sont facilement déplacés selon les exigences de façon à suivre la marche des événements dans toutes les sphères d'activité.

Un de ces tableaux constitue en fait l'organigramme de la Direction de l'hydraulique maritime. Tous les services du gouvernement fédéral y sont notés et des fils de couleurs différentes s'entrecroisent sur tout le tableau à la façon d'une toile d'araignée. Ces fils relient les noms des membres du personnel aux services dont ils dépendent et de là jusqu'au sommet de la pyramide soit jusqu'au poste de directeur de l'hydraulique maritime, M. D. M. Ripley.

A première vue, pour le commun des mortels, ces tableaux peuvent paraître comme de gigantesques casse-tête absolument indéchiffrables. Cependant, un mot d'explications de M. Gauthier, et, en moins de cinq minutes, vous avez tout saisi . . .

Aux chefs de services et aux employés du chenal maritime—et c'est d'ailleurs pour leur bénéfice que le projet a été conçu—le centre d'information visuelle rend de précieux services. Une visite au centre de temps à autre permet à chacun de se renseigner en un clin d'œil sur la marche des travaux et l'état des dépenses.

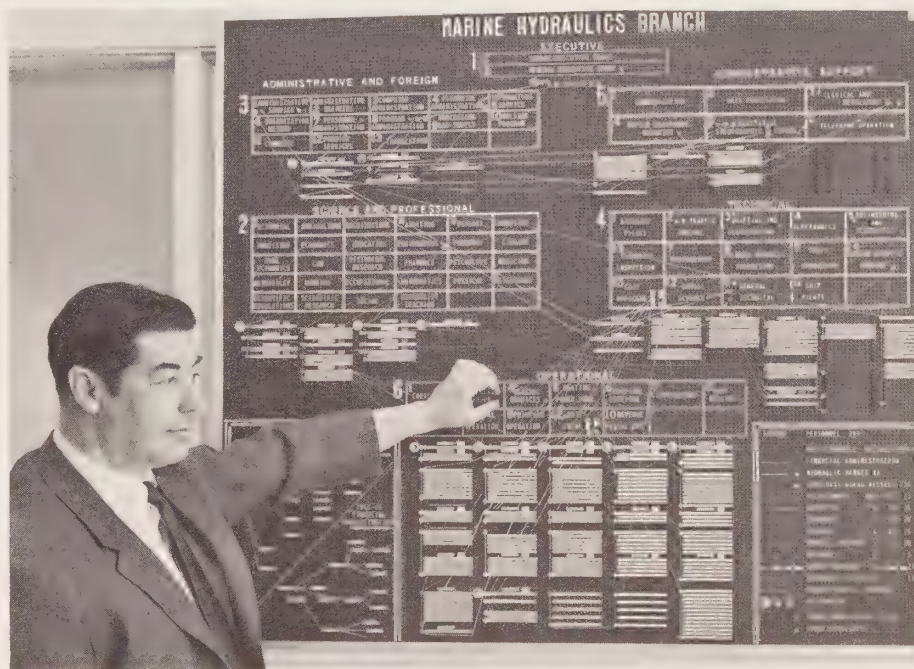
Le chef de la Division du chenal maritime, M. William P. O'Malley, est peut-être celui qui a le plus souvent recours aux services qu'offre le centre d'information. Ca lui permet de suivre de jour en jour et avec précision la marche des travaux. Un coup d'œil sur l'état des dépenses lui permet d'appliquer les restrictions là où la chose s'impose. Les déplacements du personnel y étant également notés, il est en mesure de savoir précisément où se trouve tout son monde.

Le centre d'information, selon M. O'Malley, constitue un excellent instrument de travail. En plus de donner un aperçu détaillé de tout le rouage admi-

nistratif et des travaux en cours, les tableaux servent avantageusement aux séances d'études des chefs de services et du personnel.

M. Gauthier estime qu'il a consacré environ sept ans à l'élaboration de son programme. La tâche la plus pénible a été évidemment de recueillir toutes les données et de trouver enfin les moyens de coordonner et d'agencer toute cette information sur trois tableaux.

Cette tâche étant complétée, ce n'est maintenant qu'un travail de routine. Il ne reste plus qu'à déplacer quotidiennement les jetons, selon les besoins, et le truc est joué.



**KEEPING EVERYONE IN THE PICTURE—**  
*In the information centre of the Montreal-St. Lawrence Ship Channel Office, three of these peg board operational charts give up-to-date data on all the operations, including names of personnel, type of operations being conducted, progress of work and monthly expenditures. So complete is the data provided by the charts that it is possible at any time to get a complete picture of the whole ship channel operations. Gaetan Gauthier, budget officer, who designed the charts, is seen revising information on the Marine Hydraulics Branch chart.*

**EN UN CLIN D'OEIL, ON A TOUT SAISI—**  
*Cette photo nous fait voir un des trois tableaux installés dans le centre d'information visuelle de la Division du chenal maritime du Saint-Laurent, à Montréal. Celui-ci constitue l'organigramme de la Direction de l'hydraulique maritime. Il établit la hiérarchie dans les services, indiquant clairement où chaque membre du personnel se situe dans la pyramide, au sommet de laquelle se trouve le directeur, M. D. M. Ripley. L'auteur des tableaux, M. Gaétan Gauthier, est photographié ici au moment où il s'apprête à déplacer un jeton qui sert à identifier un service.*



# TRANS-CANADA

## Defensive Driving in Manitoba

**Winnipeg**—The Central Region held its first defensive driver training course in Winnipeg from January 20 to 23. The course, consisting of four two-hour sessions and attended by 89 Regional Office personnel, was considered most successful, each participant receiving a defensive driver training certificate.

Defensive driver training is sponsored in this area by the Greater Winnipeg Safety Council, which is making an all-out effort to promote defensive driving throughout the Metro area and Manitoba. The council provided two trained instructors and all the necessary material and equipment used in driver education. Eight films were shown and these were found to be both interesting and educational. They depicted many instances where drivers made poor or improper decisions which had unfortunate results.

It was gratifying that such a keen interest was shown by employees from all branches, and many of those attending recognized ways of improving their driving habits. The presentation by the Safety Council's instructors held the interest of all those attending the course and cannot help but have lasting results.

Defensive driver training improves the operator's ability to continually evaluate surrounding circumstances when operating a vehicle in heavy traffic and on the highway. He can predict more easily what is developing or happening around him and so control his vehicle to either avoid an accident or if it is completely unavoidable, to take a course of action that most probably will reduce damage or injury.

## Fire Prevention Awards

**Ottawa**—In the annual fire prevention contests for 1968, Department of Transport, Atlantic Air Service Region, Moncton, N.B. won the Minister of Public Works Trophy. The trophy was awarded in the Group C class for the best annual fire prevention program of a regional administrative group of a federal government civil department or agency.

Edmonton International Airport was placed second in the Group B class for the Howard Green Trophy. Third was the Canadian Coast Guard College, Point Edward, N.S. Halifax International Airport received an honourable mention.

Group B class was for the best annual fire prevention program of a multi-building complex of a federal government civil department or agency.



**UN STAGE D'ÉTUDES À QUÉBEC**—Deux élèves-officiers de la classe de finissants au Collège de la Garde côtière canadienne ont fait un stage de quatre mois, l'an dernier, à bord du brise-glace baliseur «J. E. Bernier», dont la base se situe à l'Agence de la marine du ministère des Transports, à Québec. Cette période d'entraînement à bord des navires de la Garde côtière fait partie du programme d'enseignement auquel les élèves-officiers doivent souscrire durant leur cours de quatre ans prodigué au Collège situé à Sydney, en Nouvelle-Écosse. Le séjour à bord d'un navire constitue en quelque sorte un test d'endurance pour les futurs officiers. Ils doivent s'adonner à toutes les corvées, depuis les tâches de simple matelot jusqu'aux fonctions des officiers de bord. Après un séjour dans la chambre des machines, ils passent à la timonerie où ils assument des fonctions à la vigie avant de s'initier aux postes de commande, comme troisième et deuxième officier, et, enfin, de jour, en compagnie du chef-officier. L'agent régional des Services de la Marine, M. Jean-Paul Godin, a tenu à signaler le dévouement déployé par les deux élèves au cours de leur séjour à Québec. A cette fin, on a présenté un cadeau-souvenir aux deux futurs officiers au cours d'une cérémonie dans les bureaux de l'agent. Dans cette photo, de gauche à droite, on voit le surintendant des mécaniciens, M. Donat Gravel; les élèves-officiers Jim Calvesbert et Kemp Ross; et le capitaine Elphège Pelletier surintendant régional des services de la marine.

## FAI official

**Ottawa**—Andre Dumas, Chief, Airports Operations Review in the department and an immediate past president of the Royal Canadian Flying Club Association, was recently re-elected vice-president for Canada of the Federation Aeronautique Internationale (FAI).

Born in Montreal, Mr. Dumas served during the Second World War with the RCAF and the British Fleet Air Arm as a pilot. He still holds a commercial pilot licence.

FAI is the international body responsible for the monitoring and recording of all aviation and space record attempts wherever they may be made in the world. With headquarters in Paris, France, FAI represents 68 aviation-minded countries around the globe. In addition to its participation in record attempts, FAI helps the cause of general and private aviation nationally and internationally.

## M. André Dumas, vice-président de la FAI

**Ottawa**—M. André Dumas, chef du Contrôle des opérations des aéroports au ministère, vient d'être réélu vice-président de la Fédération aéronautique internationale. M. Dumas était ci-devant président de la Royal Canadian Flying Clubs Association, poste qu'il occupait depuis déjà deux ans.

La Fédération est un organisme international chargé de cumuler des dossiers et de recueillir les données sur les records tentés dans les domaines de l'aviation et de l'espace dans tous les coins du monde. La Fédération, dont le siège est à Paris, France, compte 68 pays-membres. La contribution de cet organisme à la cause de l'aviation en général est des plus importantes.

Natif de Montréal, M. Dumas a fait partie de l'Aviation royale du Canada et de l'Aéronavale britannique à titre de pilote durant la dernière guerre mondiale. Il détient encore sa licence de pilote professionnel.



# It's transport all the time

While the working hours of Air Traffic Control employees are devoted to the safe movement of their fellow citizens, many in their spare time still have their fingers in the transport pie by constructing flying machines, boats, automobiles and other vehicles. One controller was seen recently building a two-man bicycle.

A recent look into the basement "factories" of some Toronto Air Traffic Control employees uncovered three aircraft, one sailplane, one auto and some model trains.

Reid Hutchinson has been flying his pet hobby since 1964. He spent two years and four months constructing a beauty of a flying machine in the basement of his home. CF-RTH was exhibited at the CNE while it was under construction in 1963 and was a hit at the Brampton Flowertown parade in 1965. It was towed through town on a float.

## Trip to Illinois

Reid spends a lot of his free time flying and has a total of 260 hours' flying to his credit, including a trip to an experimental aircraft meet at Rockford, Illinois, in 1966. The total distance was 575 miles and it took Reid five and a half hours to get there in his home made plane.

If you are in the vicinity of Campbellville, Ontario, and see an airplane that appears to be engineless chances are it is controller Dale Goulin in his BG-12 sailplane. Dale had been renting sailplanes for his favourite sport of gliding for five years and then decided to build his own. This took him three years and involved the removal of some of the framework of his basement windows to get the completed project out, a great deal of humour and the patience of his wife.

Dale recalls with mock horror the morning he was leaving for work after a disagreement with his wife. She had passed him in the hall, saw in hand, on her way to the basement.

Ken Riseborough's efforts are grounded and follow a love of old autos—Durant, Essex and Ford—which had been owned by his father. Work on a 1901 Oldsmobile runabout is nearing completion in his basement. It will seat two and will travel

at about 15 miles an hour—perhaps to the corner store or the occasional parade.

Two aircraft are in the construction stage in the basement workshops of Bill Hill and Jim McQuinn.

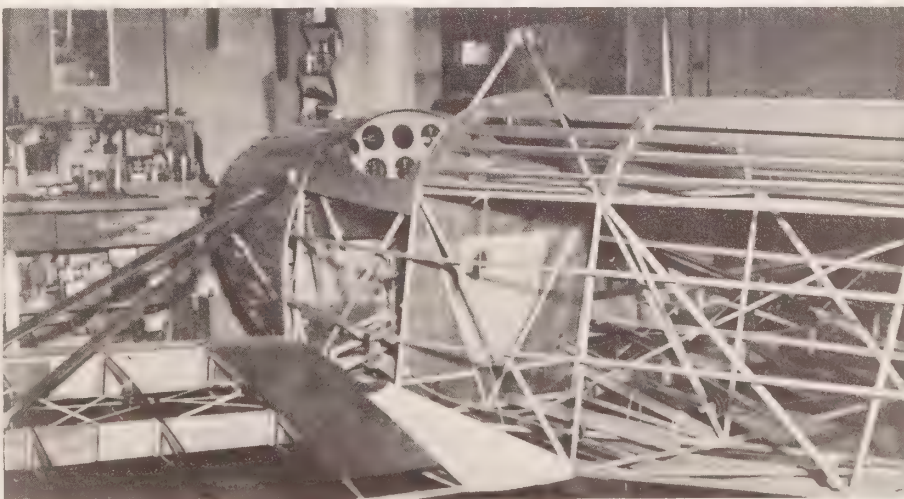
The model train hobby of Gerry Mank includes a collection of scale model train engines, cars, cabooses, towns, factories

and bridges collected since his boyhood. The style is different from the large-scale vehicles of the other hobbyists, but it is still transportation. Besides, Gerry has a large basement and recently has been seen at auctions gathering some railway equipment, such as old train lanterns, horns and wheels . . . WHEELS?



**JUST CAN'T GET AWAY FROM TRANSPORT**—For their off duty hours employees of Toronto Air Traffic Control have a wide and varied assortment of hobbies, and they mostly deal with transportation—on land, in the water and in the air. TOP is Dale Goulin's project which he completed in his basemen "factory", and BOTTOM, Reid Hutchison's CF-RTH under construction.

**C'EST UN DOMAINE CAPTIVANT**—Les préposés à la circulation aérienne à l'aéroport de Toronto n'arrivent pas à échapper au sujet qui les passionne: l'aviation. La photo du haut nous fait voir le planeur que Dale Goulin a construit de toutes pièces dans le sous-sol de sa demeure. Ci-dessous, c'est le CF-RTH en construction à la demeure de Reid Hutchison.





# retirements

# à la retraite

## Miss E. G. Stevenson

After being in government service for more than 20 years, the last nine of which she had been with the Department of Transport in Ottawa in charge of the Hunter Building health unit, Miss Edith Gertrude Stevenson retired on March 3.

Born in St. Catharines, Ontario, Miss Stevenson moved to Ottawa at an early age and attended Ottawa schools. She graduated from Butler Hospital, Providence, Rhode Island, and later obtained a Public Health Diploma in Nursing from the University of Toronto.

She was engaged in private duty nursing in Ottawa for a short time before joining the staff of the Victorian Order of Nurses. She was in that organization in North Bay, Preston, Montreal and Ottawa.

Miss Stevenson enjoyed being in charge of the health unit in the Hunter Building. "I have seen many changes during my time here and I have made very many friends", she says. The health unit which Miss Stevenson directed services 1,837 Public Service employees. "You can't help but make many friends when you are working with so many people", she adds.

During recent years she had worked in some of the new buildings in the city, but found that older edifices like the Hunter Building were more friendly — "you feel more at home in them."

Miss Stevenson plans to do a lot of travelling, but at the same time intends to continue to share the vast store of knowledge built up during her many years of service to the nursing profession. She is an avid lawn bowler and plans to carry on with that sport and also do some skiing.

## Elijah Bath

Elijah Bath has retired from the department at Gander International Airport after more than 22 years of government service.

Mr. Bath started work at Gander with the United States Air Force Post Engineers in 1943. He joined the Newfoundland Government civil aviation division in 1946 and transferred to the Department of Transport at Confederation in 1949.

Following a stay with a son in Long Beach, Mr. and Mrs. Bath were expected to take up permanent residence at Eastport.



**ALL HER FRIENDS**—Miss Stevenson attends to one of her patients in the Hunter Building clinic.

## Andrew S. Cleveland

Chief Engineer Andrew S. Cleveland of CCGS *John Cabot* was feted at St. John's, Newfoundland recently on his retirement after 43 years spent on Canadian ships. As a memento of the occasion, he was presented with a silver salver inscribed from "The Captain and Officers" of the *John Cabot*.

Born in Liverpool, N.S., Andy first went to sea as a fireman and worked and studied his way to junior engineer certification with the Mersey Paper Company and Imperial Oil. He served with the Royal Canadian Navy in the Second World War. Other employers included Canadian National Steamships and the Canadian Hydrographic Service before he joined D.O.T. in 1958.

With numerous hobbies including reading, photography, painting, bridge, and

the designing and making of metal ornaments, his retirement is unlikely to be idle.

## Jim Walsh

An aircraft maintenance engineer with the Flight Services Division has retired after 19 years of service with the Department of Transport.

Jim Walsh joined the department in 1949 at Montreal. He was transferred to Ottawa in 1953.

## S. N. Spencer

Simeon Nathan Spencer (Sim) has retired after 30 years with the department. He served as radio operator aboard DOT ships, at Hudson Straits and east coast Stations, and finally at Halifax Aeradio.

A presentation of gift certificates was made to Sim at Halifax International Airport on behalf of co-workers throughout the country.

# appointments

# nominations

## Gets Post in Geneva

"I will do my utmost to uphold the good name of Canada", Watson Walter (Scotty) Scott of the Telecommunications Policy Bureau, told his many friends from the Department of Transport and the new Department of Communications who gathered in the RCAF Ottawa Officers' Mess on February 19 to bid him farewell before he left for Geneva.

In Geneva, Mr. Scott has joined the General Secretariat of the International Telegraph Communications Union. This was a great honour bestowed on him, and on Canada, as it is the first senior post of its kind to be given to a Canadian. He will spend from two to three years in his new appointment.

He heads the Radio, Telegraph and Telephone Division in the Department of External Relations in Geneva.

Making a presentation to Mr. Scott on behalf of his friends in the two departments, Gordon Nixon, Director-General of the Telecommunications Policy Bureau, paid tribute to the great contribution Mr. Scott had made to the work of the Bureau when it was with D.O.T. and since it became part of the Department of Communications. "Scotty, he said, "was a very resourceful man."

Mr. Scott was appointed to the position of Executive Assistant to the Director of the Telecommunications Policy Bureau in 1967 and for several months before leaving for Geneva had been active in the Planning Group working on detailed development of the new Department of Communications. This was in addition to his continued duties of Executive Assistant to the Director-General of Telecommunications. He had taken this post after serving in D.O.T. Telecommunications and Electronics Branch as head of the Leased Services Section, where he began duties in 1963.

Prior to that time Mr. Scott had a challenging and colorful career in the military services on active duty or reserve from 1937 to 1960.

## Bryan Goodyer

Bryan Goodyer, editor of this magazine for the past two years, has "retired" to work in the Department of Consumer and Corporate Affairs.

During Bryan's tenure, the magazine changed its name to "Transport Canada" and won praise from the Canadian Industrial Editors' Association, which gave it an "honourable mention" in national competition last year.



**FROM ALL OF US**—Gordon Nixon, Director-General of the Telecommunications Policy Bureau, on right, presents a gift to Mr. Scott on behalf of the many friends who had joined to bid Scotty farewell.

Born in Toronto, Bryan studied journalism at the Ryerson Polytechnical Institute and worked on the staffs of the Hamilton Spectator, the Montreal Gazette, and the Ottawa Citizen before entering government service.

## M. Bryan Goodyer

M. Bryan Goodyer, ci-devant rédacteur de la revue Transport, vient de passer au service du ministère de la Consommation et des Corporations.

C'est pendant le stage de M. Goodyer aux Transports que la revue a changé de nom et qu'elle a même décroché une «mention honorable» pour l'excellence de sa présentation dans un concours national parrainé par la Canadian Industrial Editors' Association.

Né à Toronto, Bryan a étudié le journalisme au Ryerson Polytechnical Institute. Il a par la suite été à l'emploi du Spectator de Hamilton, de la Gazette de Montréal et du Citizen d'Ottawa avant de passer au service du gouvernement.

## A. Victor Bushe

Succeeding Bryan Goodyer as editor of Transport is A. Victor Bushe, who previously worked in the Information Services of the Canada Department of Labour.

Victor joined government service two years ago with 18 years' experience in newspapers in the U.K. and Canada. During his 11 years in Canada he has held appointments as managing editor and city editor.

Born in Lurgan, Northern Ireland, he served with the North Irish Horse in the British Army in the Second World War and saw service in North Africa, Italy, Belgium and Germany.

## M. A. Victor Bushe

Le successeur de M. Bryan Goodyer au poste de rédacteur de la revue Transport est M. A. Victor Bushe, qui nous arrive du Service d'information du ministère fédéral du Travail.

M. Bushe est entré dans les services du gouvernement il y a deux ans après 18 ans de journalisme actif au Royaume-Uni et au Canada. Au cours de ses onze années au Canada, il a occupé le poste de directeur de l'information dans divers quotidiens.



**A. Victor Bushe**



# d.o.t. personnel get \$1290 for suggestions



*Get in line for those suggestion awards*

Suggestions submitted by 25 Transport Department employees recently brought them a total of \$1,290 in awards. These suggestions varied from new methods to save time and material to alterations in equipment to prevent death and injury to employees.

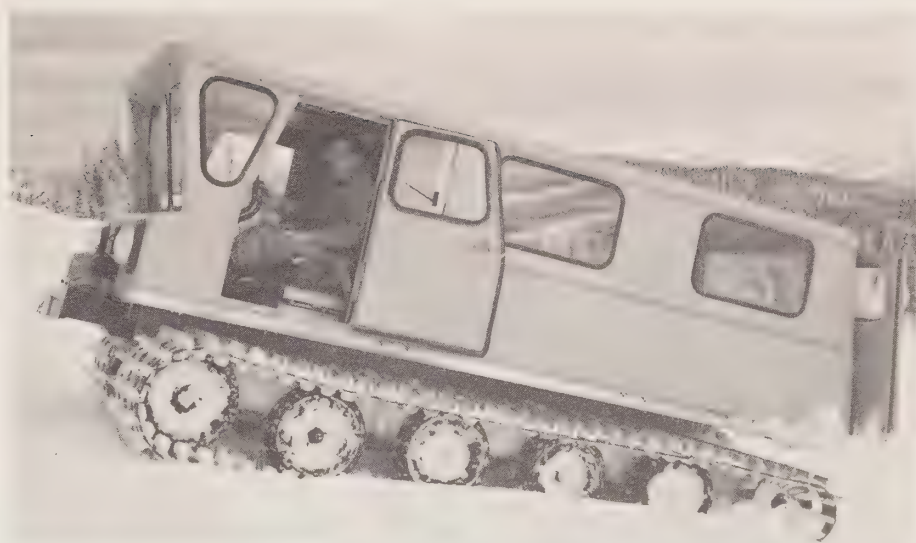
Highest single award was a cheque for \$300 presented to Sterling D. Wood, a communicator at Montreal Airport. Through Mr. Wood's initiative a facsimile transmitter was declared surplus to office requirements and resulted in rental savings of \$2,460 per year.

Technician V. J. Read of Cloverdale, B.C. was a double winner. He received cheques totalling \$65 for two suggestions. One cheque for \$40 was for his suggestion that a number of lists used in Radio Regulations be printed on both sides to save paper, storage and shipping charges. The other for \$25 was for a suggestion that a sharp-edged metal binder strap be replaced by a new type to eliminate accidents to employees handling the binders.

Those who received suggestion awards recently included, in alphabetical order:

NAME	POSITION	LOCATION	AWARD
Anderson, R. N.	R/Operator	Richmond, B.C.	\$ 15
Baker, Mrs. E. M.	Clerk	Peterborough, Ont.	50
Benko, C. J.	Technician	Moncton, N.B.	60
Bilodeau, G.	Clerk	Vanier City, Ont.	60
Chamberlin, Miss F. L.	Typist	Edmonton, Alta.	40
DeRoche, J. H.	Technician	Antigonish, N.S.	50
Drouin, R. Y.	R/Operator	Vancouver	20
Ennever, C. A. G.	R/Operator	Sidney, B.C.	40
Hirst, D. B.	R/Operator	Richmond, B.C.	25
Jeffries, M. G.	R/Operator	Alert Bay, B.C.	40
Labelle, G. R.	Clerk	Montreal	20
McEvoy, C.	ASI	Ottawa	50
McKenzie, J.	Canalman	Smiths Falls, Ont.	50
Matley, P. M.	A/R/Operator	Prince Rupert, B.C.	50
Maxwell, A. W.	A/R/Operator	Sandspit, B.C.	15
Overton, T. R.	Technician	Fort Simpson, N.W.T.	80
Read, V. J.	Technician	Cloverdale, B.C.	65
Robillard, J.	A/M/Engineer	Victoria	25
Saunders, R. C.	Technician	Richmond, B.C.	50
Stevenson, C. J.	Aircraft Mechanic	Richmond, Ont.	80
Terry, F.	Technician	Broadview, Sask.	15
Tughan, R. B. W.	Technician	Ottawa	25
Waine, B. B.	R/Operator	Ucluelet, B.C.	15
Wood, S.	Communicator	Lasalle, P.Q.	300
Ziroff, W.	Master (Tug)	Lakefield, Ont.	50

## Meeting Problems in Winter Transportation



A replacement snow vehicle for D.O.T. went into service this year at the Enderby Telecom site. It is being used as winter transportation to the VOR, TACAN, NDB and PAL peripheral communications site on top of Mount Mara, near Enderby, B.C.

The vehicle, designed and built by the Flextrack Company in Calgary, has an automatic transmission and lever controls for steering and braking. Each snow track is 24 inches wide and has aluminum grouser bars two inches deep to bite into the snow.

One of the problems of transportation to the top of Mount Mara during winter is the deep snow. Mount Mara is only 6,700 feet but it is located in a snow belt, at the north end of the Okanagan Valley, and during the winter the 30-foot snowfall settled to a depth of 10½ feet.

Other difficulties are the amount of power required to climb through the snow and the difficulty of maintaining sufficient lubrication. On a steep slope the oil drains to one side of the engine sump, causing the engine to burn out because of low oil pressure. Helicopters have been tried as a means of transportation but the mountaintop site is in the clouds much of the time during the winter months and helicopters are not too reliable.

In addition, the heavy snowfalls pile up around the VOR antenna, distorting the radiation pattern. This could lead

to erroneous navigational readings to an airline pilot. A bulldozer is kept on top of the mountain during the winter to push the snow away from the VOR antenna.

The snow melts during the months of May and June, allowing the mountain flowers to bloom in the Alpine meadows during July. In the warmer weather the 300-foot steel radiobeacon tower collects lightning discharges at an electrifying rate, and the two-inch discharge gap arcs over frequently.

By September the snow will be back again on Mount Mara and the snow vehicle will be out for another season.

## Forecast increased interest in D.O.T. Scholarship Plan

For the seventh consecutive year the department is continuing its Scholarship Plan to assist the sons and daughters of departmental employees during their first year of university studies.

Over the years young ladies and men in each of the provinces representative of all of the service areas of the department have been winners. Since the inception of the plan there has been a steady increase in the number of annual applications and this year because of additional funds which will be available for scholarships it is anticipated that there will be increased interest and participation.

The scholarship program was established in 1962 with money donated by employees who had belonged to the department's group insurance plan prior to the introduction of the comprehensive government surgical-medical insurance plan.

Surplus money was returned to D.O.T. by the insurance company and contributors to the plan were given the opportunity of receiving a refund or donating it to a scholarship fund. In all, some \$60,000 was donated and a board of trustees was set up to administer the fund.

To be eligible, a student must first be a dependent of an active or retired D.O.T. employee.

The Scholarship Plan is publicized through a departmental circular each year. This is distributed to all Department of Transport establishments. In addition, regional and field offices are provided with application forms and detailed information on how to apply. Every encouragement should be given to the sons and daughters of departmental employees to apply for one of these scholarships if they have attained an average of 70 per cent or better during their final school year.

Requests for information should be directed to:

Mr. L. G. Cope,  
Secretary, DOT Bursary Plan,  
Department of Transport,  
Hunter Building,  
Ottawa 4, Ontario.

## Le programme de bourses '69

Le programme de bourses universitaires destinées aux enfants des membres du personnel des Transports en est à sa septième année d'existence. Ces bourses sont consenties aux élèves méritants qui s'inscrivent à leur première année d'études universitaires. Depuis le début du programme, en 1962, des jeunes d'à peu près toutes les régions où se trouve du personnel du ministère ont eu l'occasion de bénéficier de ces bourses.

Seuls les enfants d'employés actuels ou à leur retraite sont éligibles. L'étudiant faisant la demande devra, de plus, avoir conservé une note moyenne d'au moins 70 pour cent au cours de sa dernière année du cours secondaire.

Des renseignements détaillés sur le programme sont diffusés annuellement dans tous les services du ministère. Toute demande de renseignements additionnels doit être adressée à:

M. L. G. Cope,  
Secrétaire,  
Programme des bourses,  
Ministère des Transports,  
Immeuble Hunter,  
Ottawa 4, Ontario.



# Transport ALBUM des Transports



## CCGS Ernest Lapointe

The Canadian Coast Guard Ship *Ernest Lapointe*, named after a man who sat for 37 years in the House of Commons and who was a minister of justice and earlier minister of marine and fisheries, is an icebreaker working on the St. Lawrence Ship Channel.

LENGTH: 184 feet

BREADTH: 36 feet

DRAFT: 15.6 feet

POWER: Steam, 2,000 IHP

GROSS TONNAGE: 1,179 tons

## Le n.g.c.c. Ernest Lapointe

Le brise-glace *Ernest Lapointe*, nommé d'après celui qui a siégé aux Communes pendant 37 ans et qui fut ministre de la Marine et des Pêcheries et plus tard ministre de la Justice, est affecté au balisage et au déglacage dans le chenal maritime du Saint-Laurent.

LONGUEUR: 184 pieds

LARGEUR: 36 pieds

TIRANT D'EAU: 15 pieds, 6 pouces

PUISSANCE: vapeur, 2,000 cv

JAUGE BRUTE: 1,179 tonneaux

# TRANSPORT



**CANADA**

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JULY-AUGUST • 1969 • JUILLET-AOÛT



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Editor A. Victor Bushe

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Rédacteur français Edouard Deslauriers

L'IMPRIMEUR DE LA REINE, OTTAWA, 1969



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### COVER PHOTOGRAPH

A feature of the computer-assisted system for marine traffic control in the St. Lawrence River is this 33-foot wall chart in the Quebec Marine Traffic Control Centre. This chart of the river section, with its electronically-controlled colored magnetic discs representing ships, shows the traffic flow in the system at any given time. Information for the chart is obtained through radio contact with the ships. At the control desks are traffic controllers Marius Verreault and Fernand Boutet. (See article on page 8.)



### FRONTISPICE

Cette carte de quelque 33 pieds, au mur du Centre de contrôle de la circulation maritime à Québec, fait voir la circulation en cours dans le fleuve Saint-Laurent sur une distance d'environ 400 milles, soit presque jusqu'à l'entrée du port de Montréal. Sur ce tableau, des disques magnétiques colorés représentant les navires se déplacent électroniquement sur des routes calculées à partir de renseignements obtenus par contact radio avec les navires. Aux pupitres, on voit les contrôleurs Marius Verreault et Fernand Boutet en communication avec les navires. (Voir article en page 7.)

***Serving  
Canadian  
needs***



***Notre action  
orientée  
vers le progrès***

*Hon. Don C. Jamieson*

It is a great honour for me to speak for the men and women of the Department of Transport in Parliament and to the Canadian public. The complex and vital network of functions and services provided by the department make it one of the most important responsibilities of the Federal Government. As Minister of Transport I will do everything possible to ensure that the already established trend of progress and improvement which characterizes our department will continue to flourish.

At this stage in my association with the Department of Transport, I have not had the opportunity to meet more than a few of you. However, I want you to know that the impression I have gained so far has been one of enthusiasm, dedication and the desire to keep Canada in the vanguard of the world of transportation.

Never in man's history has the tide of progress swept forward with such speed, particularly where matters of transportation are concerned . . . and because transportation is so closely woven into the economic fibre of our lives, our actions must be shaped to serve Canadian needs in the total sense.

I look forward to meeting and working with many of you over the months and years ahead.

C'est un grand honneur pour moi que de m'adresser au Parlement et au public canadien au nom de tous ceux qui oeuvrent au sein du ministère des Transports. Le réseau complexe et essentiel des fonctions et services assurés par ce ministère en fait l'une des plus importantes responsabilités du gouvernement fédéral. A titre de ministre des Transports, je ferai tout en mon pouvoir pour que le caractère progressiste qui est celui de notre ministère continue à s'épanouir.

Depuis ma récente nomination au poste de ministre des Transports, je n'ai eu l'occasion de rencontrer que certains d'entre vous. Toutefois, je veux que vous sachiez que l'impression que j'ai ressentie jusqu'ici en est une d'enthousiasme, de dévouement et de désir de garder le Canada à l'avant-garde du monde des transports.

Jamais, dans l'histoire de l'humanité, la marche du progrès n'a atteint une telle rapidité, surtout dans le domaine des transports. Étant donné l'interrelation étroite qui existe entre les transports et l'économie dans la vie de notre pays, notre action doit s'orienter de façon à satisfaire le mieux possible les besoins du Canada.

Il me tarde de faire connaissance et de collaborer avec bon nombre d'entre vous dans les mois et les années à venir.

Don C. Jamieson



# Transportation Council

# Le Conseil des transports



TRANSPORTATION COUNCIL—*Members of the Council, from left: W. F. Nelson, Director General, Personnel; E. L. Hewson, Director, Transportation Policy and Research; Dr. P. Camu, President, St. Lawrence Seaway Authority; Hon. J. W. Pickersgill, President, Canadian Transport Commission; D. A. McDougal, Executive Assistant to the Deputy Minister (secretary); Hon. Don Jamieson, Minister of Transport; O. G. Stoner, Deputy Minister; H. A. Mann, chairman, National Harbours Board; G. A. Scott, Assistant Deputy Minister, Air; G. Sicotte, Assistant Deputy Minister, General. Absent when picture was taken—G. W. Stead, Assistant Deputy Minister, Marine; G. C. Tilley, Senior Financial Advisor.*

CONSEIL DES TRANSPORTS—*Les membres du Conseil sont photographiés en compagnie du nouveau ministre des Transports, l'honorable Don C. Jamieson, au centre. De gauche à droite, on reconnaît MM. W. F. Nelson, directeur général du personnel; E. L. Hewson, directeur des méthodes et des recherches; Pierre Camu, président de l'Administration de la voie maritime du Saint-Laurent; J. W. Pickersgill, président de la Commission canadienne des transports; D. A. McDougal, chef de cabinet du sous-ministre; l'honorable Jamieson; MM. O. G. Stoner, sous-ministre des Transports; H. A. Mann, président du Conseil des ports nationaux; G. A. Scott, sous-ministre adjoint aux Services de l'Air; et Gilles Sicotte, sous-ministre adjoint à la direction générale. MM. G. W. Stead, sous-ministre adjoint à la marine, et G. C. Tilley, conseiller financier ministériel, étaient absents au moment où la photo a été prise.*

## *Participative work improvement*

Air Services, like many other government organizations, is reviewing its manpower resources and attempting to increase its productivity per man-hour. As a result, a new phrase in management techniques that is receiving our attention is "participative work improvement" or "PWI".

Air Services is embarking on a 2 to 3 year PWI program in which first line supervisors and their staffs will "participate" in suggesting ways to improve our productivity. This avoids having detailed work studies undertaken by consultants and others unfamiliar with our specialized operations.

Our immediate goal is to have 150 supervisors and their staffs, at headquarters and in three of the Air Services Regions, involved in this program within the next 12 months. Unlike previous programs where there is little follow-up after the formal training period, PWI involves the supervisor immediately in trying to improve his own production and continues to assist him throughout the program.

Although the program will be initiated at the supervisors' level, PWI's success will depend not only on the active participation of all the operating and administrative personnel in Air Services but with managers at every level. Before long, and perhaps before this is read by readers of TRANSPORT, PWI will be a familiar phrase to many in the department.



*Le sous-ministre adjoint pour l'Air,  
G. A. SCOTT  
Assistant Deputy Minister, Air*

## *Participation au perfectionnement du travail*

Les Services de l'Air, comme de nombreux autres organismes gouvernementaux, étudie ses ressources en main-d'oeuvre et essaye d'augmenter sa productivité par homme-heure. Il en est résulté une nouvelle expression utilisée dans les techniques de la gestion et à laquelle nous accordons notre attention, soit «participation au perfectionnement du travail» ou «PPT».

Les Services de l'Air entreprennent un programme de PPT de 2 à 3 ans auquel les surveillants de premier palier et leur personnel «participeront» en proposant des méthodes en vue d'améliorer notre productivité. Cela évitera que des études détaillées soient effectuées par des experts-conseils ou d'autres personnes qui ne sont pas au courant de nos travaux spécialisés.

Notre but immédiat est que 150 surveillants et leur personnel des bureaux de l'administration centrale et de trois régions des Services de l'Air participent à ce programme au cours des douze prochains mois. Contrairement aux programmes précédents auxquels peu de suite était donnée après la période officielle de formation, PPT met immédiatement en cause le surveillant en essayant d'améliorer sa production propre et continue à l'aider tout au long du programme.

Bien que le programme sera instauré au niveau des surveillants, le succès de PPT ne dépendra pas seulement de la participation active de tout le personnel administratif et d'exploitation au sein des Services de l'Air, mais des gestionnaires à tous les niveaux. Avant longtemps, et peut-être avant que les lecteurs de TRANSPORT prennent connaissance du présent article, PPT sera une expression familière à de nombreuses personnes au ministère.



# Focus on world ports and harbours



Howard A. Mann



Walter J. Manning



Fred K. DeVos

Delegates from some 35 member countries had another opportunity of discussing the latest policies and problems in organization, management, administration, operation and development of ports all over the world when they attended the Sixth Biennial Conference of the International Association of Ports and Harbours, held in Melbourne, Australia, earlier this year.

Representing the Government of Canada at the conference were Howard A. Mann, chairman of the National Harbours Board and first vice-president of I.A.P.H.; Walter J. Manning, Director of Marine Works of the Department of Transport, an I.A.P.H. director and a member of the executive committee, and Fred K. DeVos, senior economist, Marine Services and a supporting life member of I.A.P.H. In addition, the Canadian Harbour Commissions of Fraser River, Hamilton, Oshawa, Port Alberni and Windsor sent delegates.

Since I.A.P.H. Conferences are held every two years, the next gathering will be in 1971 and Canada is to have the privilege of playing host on that occasion. At the closing session of the Melbourne conference an invitation address was delivered by Mr. Mann on behalf of the National Harbours Board, who are to host the 1971 conference in Montreal. The 1973 conference will be held in the Netherlands.

## Topics discussed

"Port Administration and Responsibility", the title of the conference's panel discussion might perhaps be said to represent the main theme of the more than 20 major and minor papers contributed to this particularly successful assembly, in contrast with the 1967 conference at Tokyo when more emphasis was placed on port planning and construction. While it is obviously beyond the scope of this article to list all papers delivered at Melbourne, the following titles may give an idea of the type of topics discussed:

"Estuarial Grouping of Ports" by the chairman, Clyde Port Authority; "The Administrative Organization of Port Authorities in France" by the Director General, Port Autonome de Marseille; "The Advan-

tages of a Seaport Located Inland" by the general manager, Port of Hamburg Authority; "The Ports, Motive Elements of the Economy" by the Director General, Port Autonome de Dunkerque; "The Role of Ports in Industrial Development" by the general manager, Port of Antwerp; "The Advantages in International Trade of Vehicular Deck Ships in the Australian Concept" by the assistant general manager, The Australian National Line; "Relative Merits of Unitized and Containerized Cargoes" by the director, Materials Handling Bureau, Australia Department of National Development; "The Role of the United Nations as Related to World-Wide Transportation Problems" by a co-administrator, U.N. Development Program.

## Of Canadian interest

Of particular interest to Canadian delegates was a paper on "The Impact of Mineral Development on the Growth of Australian Ports" by W. W. Sweetland, general manager, engineering and development, Broken Hill Proprietary Co. Ltd., since it touched on many points and problems with a direct bearing on the Canadian scene, where the rapidly growing export volumes give rise to comparable problems. This paper also revealed an insight in the harbour administration and financing philosophy in Australia, which generally tended to confirm the validity of the proposals contained in the department's harbour administration study which was referred to the House of Commons Committee on Transport and Communications earlier this year.

With the exception of ports in the State of New South Wales, which are operated by a state-wide body, the Maritime Services Board, all ports in Australia as well as in New Zealand are managed by local commission-type bodies. Melbourne itself, Australia's leading general cargo port, particularly in the overseas trades, is operated by an autonomous local entity—the Melbourne Harbor Trust Commissioners—which was established by an Act of the State of Victoria Parliament in 1877 to own, manage and develop the port. Similar bodies, usually called harbour boards,

are responsible for administration and day-to-day operations of New Zealand's main ports of Auckland, Wellington, Taranaki and Whangarei.

In all cases, the states' main interest in harbours centres on overall coordination of the ports' access to the capital market, either directly through guaranteed bonds or indirectly through the approval of government loans to the local port authorities.

## I.A.P.H. Membership

Membership of I.A.P.H. is comprised of port authorities throughout the world and includes both corporate members and individual supporting members connected with or having an interest in port operations. Currently the following countries are represented in the Association: Argentina, Australia, Bahamas, Belgium, Brazil, Burma, Canada, Republic of China, Colombia, Denmark, Ecuador, Eire, France, Germany, Ghana, Hong Kong, India, Indonesia, Iran, Israel, Italy, Jamaica, Japan, Kenya, Liberia, Malaysia, Malta, Mexico, The Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, The Philippines, Portugal, El Salvador, Singapore, S. Yemen, Spain, Sweden, Syrian-Arab Republic, Thailand, Turkey, United Kingdom, United States, Uruguay, Venezuela, Vietnam and Yugoslavia.

The object of the Association is to increase the efficiency of ports and harbours through the development and dissemination of information useful to port administrators for the purpose of furthering knowledge in the fields of port organization, management, operation, development and promotion, thereby advancing international understanding and the growth of waterborne commerce.

## Canadian first president

The idea of forming an International Association of Ports and Harbours evolved from an international conference convened by the Japan Port and Harbour Association in Kobe in 1952. Canada provided the first president of the Association in the person of B. J. Roberts, then chairman of the National Harbours Board.

# L'électronique au service de la navigation maritime

Un système à ordinateur unique en son genre au monde vient d'être introduit dans les services du contrôle de la circulation maritime dans le fleuve Saint-Laurent.

L'inauguration de ce service, qui s'ajoute aux nombreuses autres mesures adoptées ces récentes années par le ministère des Transports pour assurer davantage la sécurité de la navigation au pays, a donné lieu, en fin d'avril, à une rencontre, à Québec, des représentants de diverses entreprises s'adonnant au commerce maritime ainsi que d'associations de pilotage et d'autres services de la marine en général.

Ces installations nouvelles, au principal Centre de contrôle de la circulation maritime, à Québec, permettent aux contrôleurs de suivre avec précision la marche des navires dans presque toute l'étendue du fleuve, soit sur une distance de quelque 400 milles entre Sept-Iles et Montréal.

En accueillant le groupe de visiteurs au Centre de contrôle, le 30 avril dernier, le sous-ministre adjoint à la marine, M. Gordon W. Stead, a particulièrement insisté sur l'intérêt qu'apporte le ministère aux questions touchant la sécurité de la navigation. Il a rappelé que ces installations nouvelles serviront à améliorer sensiblement les services à la navigation dans le principal cours d'eau conduisant au cœur du continent.

L'ordinateur permet aux contrôleurs de la circulation maritime d'étudier les problèmes relatifs à la circulation dans le fleuve sans avoir à se rappeler tous les détails ayant trait aux navires qui s'y trouvent.

Bien sûr, le contrôleur demeure l'élément essentiel au fonctionnement du service. Il recueille les renseignements sur la circulation par contact radio avec les navires, mais il n'a plus à faire, à la main, tous les calculs détaillés requis pour déterminer d'abord la position exacte du navire puis en suivre la marche sur papier. Tout ce travail est maintenant assumé par l'ordinateur qui digère l'information, fait les calculs nécessaires et transforme le tout en données précises qu'on transmet automatiquement à un vaste tableau où des disques magnétiques colorés représentant les navires se déplacent électroniquement sur ce même tableau qui fait voir l'étendue du fleuve sous contrôle.



**VISITE AU CENTRE DE CONTRÔLE**—*En compagnie du contrôleur Conrad Boucher, à gauche, le capitaine George Leask, chef des services du contrôle de la circulation maritime au ministère, et le capitaine Robert Thériault, responsable du Centre de contrôle de Québec, se penchent sur une des diverses pièces d'équipement électronique nouvelles installées pour assurer un contrôle encore plus efficace de la circulation dans le fleuve Saint-Laurent.*

Les contrôleurs, ainsi libérés de tâches astreignantes, peuvent suivre avec précision la marche des navires dans leurs secteurs respectifs. Ils disposent ainsi de plus de temps pour prévenir les navires de dangers possibles et sont en mesure de fournir tous les renseignements requis pour assurer une circulation sûre, rapide et ordonnée dans le fleuve.

Au nombre des représentants du ministère accompagnant le sous-ministre adjoint aux cérémonies marquant l'inauguration du nouveau service, se trouvaient MM. R. R. Macgillivray, directeur des Règlements de

la marine; Louis Lavoie, directeur des Services du personnel à la marine; Walter Manning, directeur des Travaux maritimes; H. J. Williamson, directeur des Télécommunications et de l'Électronique; W. P. O'Malley, ingénieur en chef du chenal maritime du Saint-Laurent; D. M. Ripley, directeur de l'Hydraulique maritime; Jean-Paul Godin, agent maritime de Québec; le capitaine George Leask, chef des services du contrôle de la circulation maritime dans le Saint-Laurent; et le capitaine Robert Thériault, responsable du Centre de contrôle de Québec.





L. M. Montgomery  
(From photo in Public Archives of Canada)

## Ferry commemorates author of "Anne" classic

The \$4,000,000 ferry *Stena Danica*, purchased for summer service with the Prince Edward Island fleet, has got a new name, *Lucy Maud Montgomery*, in honour of the late author of the international classic "Anne of Green Gables".

The author was born and lived most of her life on Prince Edward Island.

The popular novel, known throughout the English-speaking world and published in five other languages, has been adapted to a musical play which has been performed successfully each summer at Charlottetown's Confederation Centre for the past five years.

The new ferry, operated by Canadian National Railways, has capacity for 100 automobiles. It is first in a planned program of additional vessels and shore facilities for Prince Edward Island to carry the increasing number of summer visitors and to improve the flow of commerce to and from the Island.

# Marine Traffic Control

The new computer-assisted system for marine traffic control in the St. Lawrence River had an official launching April 30 when representatives of shipping interests and news media paid a visit to the Quebec Marine Traffic Control Centre in Quebec to see the system in operation.

In welcoming the visitors to the centre, the Assistant Deputy Minister, Marine, Gordon W. Stead, emphasised the interest the Department of Transport takes in questions relating to safety in navigation. He said the introduction of the new system would add greatly to the steps that have already been taken to increase safety in this main waterway leading to the heart of the continent.

The computer compiles data on marine

traffic between Sept-Îles and Montreal, a 400-mile section of an integrated marine traffic control system which currently extends, with the co-operation of the St. Lawrence Seaway Authority, from Sept-Îles at the mouth of the St. Lawrence to the head of Lake Erie.

A feature of the new centre is a 33-foot wall chart of the river section on which the current traffic flow is depicted. Colored magnetic discs, representing ships in the system, are electronically moved along courses computed from information obtained through radio contact with the ships.

The graphic display, in conjunction with the computer aid, is of great assistance to marine traffic controllers by allowing more time to advise ships of potential hazards.



**KEEPING TRACK OF MARINE TRAFFIC**—At the panel is traffic controller, Marius Verreault, and watching the operations are, from left, Capt. Robert T. Therriault, supervisor, Quebec Marine Traffic Control Centre; Gordon W. Stead, Assistant Deputy Minister, Marine, and Capt. George Leask, chief, Marine Traffic Control Operations.

## Special Advisor on Bilingualism

Just before this issue went to press, we were informed of the appointment of Michel Azam as Special Advisor on Bilingualism.

In view of the special position held by the Department of Transport among public services, it seems inevitable that Mr. Azam must deal with the many special problems on language-training and the implementation of the policy on bilingualism in the department. He will therefore stress the use of new audio-visual techniques by introducing the latest discoveries in the teaching of a second language. Mr. Azam also intends to implement certain projects proposed by his predecessor.

He will have the opportunity to give us all the details in a later issue.

## Conseiller spécial en bilinguisme

Au moment d'aller sous presse, nous apprenons la nomination de M. Michel Azam au poste de conseiller spécial en bilinguisme.

A cause de la place privilégiée qu'occupe le ministère des Transports dans l'éventail des services publics, il semble inévitable que M. Azam doive se pencher sur les problèmes variés et particuliers relatifs à l'apprentissage des langues ainsi qu'à l'application de la politique du bilinguisme au sein du ministère. Il mettra donc l'accent sur l'exploitation des nouvelles techniques audio-visuelles en introduisant les plus récentes découvertes dans le domaine de l'enseignement d'une langue seconde. En outre, M. Azam a l'intention de mettre en application certains projets suggérés par son prédécesseur.



# Looking at Ottawa International Airport



## An American's impressions

*This article by Gladys E. Wise gives an American's impressions of the International Airport in Canada's capital city and the air services in this country. It is published in Transport through the courtesy of Airport World.*

Flying into Canada's capital city can be unsettling for Americans addicted to the crush at many United States airports. The Ottawa terminal is too calm and orderly, too incredibly neat.

Beige terrazzo floors sparkle. Baggage arrives handily at the customs counter and is promptly cleared by polite inspectors. No smoky haze nor fingerprints mar the view through 16-ft high solargray windows in the spacious waiting room. Even the ashtrays are clean.

These are niceties; the external polish on a smoothly efficient operation presided over by D. H. Dupuis, airport manager. His handsome plant belongs to Her Majesty's Canadian Government.

Ottawa International, like most major airports in Canada, is owned and operated by the Canadian Department of Transport. The \$5 million air terminal building was designed to accommodate the 900,000 passengers expected to be using it by 1972; 500,000 more than the airport recorded 10 years earlier.

Judging by 1967 statistics, when 748,000 air travellers passed through, the predicted growth rate is somewhat low. Thus far, however, only the coffee shop is overrun by customers. A good many of these are non-travelling airplane watchers lured by the terminal's accommodation to this pastime.

Red granite columns support wide canopies to shelter the entrance and provide heated passenger walkways on the ramp side. Spectator decks atop the canopies offer equally good views of aircraft operations and the colorful sunken garden just outside the main lounge.

A quiet mezzanine surrounds three sides of the waiting room and leads to the Golden Totem dining room and aviation museum, both rated high in Ottawa guide books.

Sporadic flying activity began on the airport site in the early 1920's when the area was known as Hunt Club Field. It was not until 1927 when Charles A. Lindbergh landed there in his "Spirit of St. Louis" two months after his solo trans-Atlantic jaunt that most Ottawans knew the field existed. They promptly renamed it Lindbergh Field.

Regular flying operations on the indigenous sod and sand-dunes date to 1928 when it became home base for the Ottawa Flying Club's two Moth aeroplanes. Ten years later the Department of Transport (DOT) purchased the property. Laurentian Air Services and the Ottawa Flying Club remained as tenants.

By then the name "Lindbergh Field" or "Lindy's Field" had given way to "Uplands" which again was changed, officially in 1939, to "Ottawa Airport."

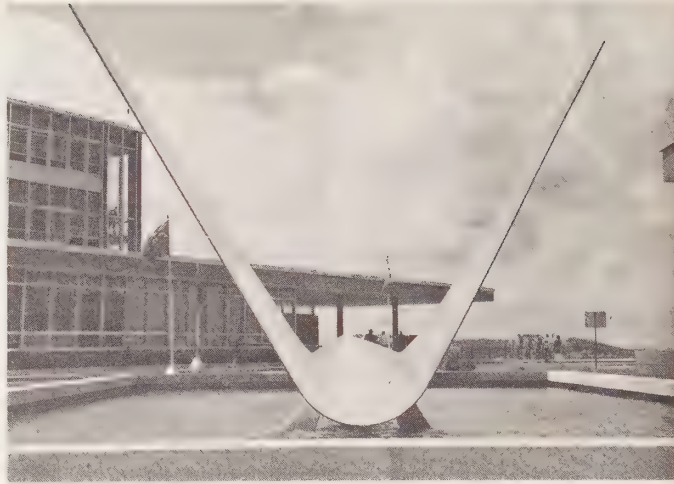
Ottawa International currently occupies 2,000 unobstructed acres 11 miles south of Parliament Hill in downtown Ottawa. The original runways, 04/22-3,300 ft., and 17/35-4,100 ft., are now reserved for general aviation. Main runways have been added for jet traffic: 07/25-8,000 ft. and 14/32-10,000 ft.





**"CALM AND ORDERLY"**—The attractive air terminal building at Ottawa International Airport can be "unsettling" for Americans addicted to the U.S. crush.

**AÉROGARE D'OTTAWA**—Cette photo fait voir l'aérogare du ministère des Transports à l'aéroport international d'Ottawa.



**THE SHAPE OF FLIGHT**—The metal sculpture symbolic of flight is seen in striking fashion in one of the reflecting pools that is a scenic feature of the air terminal at Ottawa.

**SCULPTURE SYMBOLIQUE**—Cet oiseau stylisé en tôle d'aluminium, oeuvre du sculpteur montréalais Louis Archambault, se reflète dans les eaux d'un bassin à l'entrée de l'aérogare d'Ottawa.

Plans for further expansion are already on the drawing board and, Dupuis told *Airport World*, "We hope very much that these plans will take care of normal growth. We have reserved land around the terminal building and we think that for some time modifications possible within our existing facilities will be adequate.

"We are taking steps now to improve baggage and restaurant facilities which have just about reached capacity. We may also have to go into different types of loading bridges but we have not reached the point where we need moving sidewalks or other automated passenger transport.

"The design of our building is such that boarding gates may be added as needed without great increases in walking distance."

#### **"Immoderately modest"**

Statistically, Ottawa International seems immoderately modest when you attempt comparisons to airports serving similar size cities in the United States. For instance, Ottawa's nearly 291,000 population equates roughly with that of Akron, Ohio, Miami or Honolulu.

Yet in 1967 when Ottawa Airport handled 197,000 aircraft operations, the two Akron airports, according to FAA, compiled nearly 282,000. Tourist-oriented Miami and Honolulu respectively recorded

447,000 and 305,000 total aircraft operations.

In perspective, however, Ottawa International reflects the sturdy growth of Canadian aviation as a whole and presents perhaps a more representative trend than the much larger cities of Montreal and Toronto.

Stretching more than 3,000 miles coast to coast, Canada reaches almost that far again from Windsor, across the river from Detroit, to the most northerly inhabited piece of land in the world, the Alert weather station on Ellesmere Island in the Arctic Ocean.

It is second only to Russia in land area but ranks below Ethiopia, which is 25th, in world's populations. Seventy percent of its nearly 21 million inhabitants and much of its private industry cluster in urban areas within 100 miles of the United States border.

The economic necessity for air service throughout this vast area is stimulating rapid development of an extensive air transport network—a development carefully nourished and often subsidized by the Federal Government. Increasingly, industry is adding its own cash and considered competition.

#### **Aircraft registrations**

With this impetus, civil aircraft registrations in Canada increased from 2,245 in 1951, to 5,429 in 1961, to 7,016 in 1967.

There are about 1500 airports in Canada now (including heliports, seaports, etc.) compared to 790-odd 10 years ago. Most of the mainline facilities have been built during the past 10 years.

The Canada *Financial Post* ranks Air Canada seventh among the world's airlines in revenue passenger miles. This Crown-owned-and-operated company has acquired more than \$250 million in new jet aircraft in the past two years.

In perspective, then, Ottawa's seemingly modest statistics become significant. Traffic there has nearly doubled during Dupuis' four-year tenure as airport manager. Spectacular? Maybe not. Substantial and healthy? Bet on it.

Like many Canadians, Dupuis is equally articulate in French and English. He runs the airport from a pleasant, second-floor office with a sweeping panorama of the main runways in the background.

#### **"A very high standard"**

Here he told *Airport World* that one of the biggest advantages of his government-owned setup is that the "Government sets one standard across Canada—a very high standard" and provides for the facilities and air services to sustain it. "Of course," he went on, "we would like to see all our airports self-supporting. One of our main objectives is to balance our budget."

**WAITING IN COMFORT**—*Comfort of air travellers before and during flights is ensured. Here is the spacious main waiting room at Ottawa airport, with its 16-foot high windows.*

**ON S'Y REPOSE**—*Dans cette vaste salle d'attente de l'aéroport d'Ottawa, le voyageur trouve l'atmosphère qui incite au repos et à la détente.*



Revenues derive from airline operations (Eastern and Air Canada are the major ones although Ottawa is a frequent port for charters enroute to Europe from the U.S. and Canadian west coasts), from tenant leases, competitively negotiated parking and transportation contracts and other concessions.

FBO tenants include the original ones—the Ottawa Flying Club and Laurentian Air Service—as well as Personal Plane Servicing, Ltd., Canadian Aero Services, Survair, Ltd., Ottawa Aero Services and Spartan Air Services.

Rental fees often go from one government pocket to another because, in addition to its civil operations, Ottawa International jointly serves as home base for the DOT fleet and as an air transport base of the Canadian Forces. The military portion, called Canadian Forces Base Uplands and commanded by Colonel Robert Martin Edwards, houses a variety of missions and aircraft.

Cessna 182's provide training and liaison; Cosmopolitans and Falcon Fanjets fly scheduled military runs and transport VIPs; C-130E Hercules resupply military and government personnel in Europe and the Arctic; and ECM-equipped CF-100's "keep NORAD on its toes" with frequent air defense missions.

The Aerospace Engineering Test Establishment, also a part of the Uplands base, tests and evaluates new, modified or repaired "aerospace vehicles, equipments and systems." This complex task ranges from

new aircraft acceptance checks to analyzing lubricants in watches and clocks.

#### **DOT fleet**

DOT's fleet is hangared in an unusual-looking building on the other side of the main terminal. Included are about 25 helicopters of various types and fixed-wing aircraft ranging from Beavers on floats through King-Airs, Viscounts, Jet-Stars and DC-3's.

From a Bell 47J expertly flown by DOT pilot Murray WongKee, we had a good view of this main repair base. A series of external trusses gives the building an unfinished look but actually replaces the peaked-roof hot-air trap leaving only usable, temperature-balanced space inside its low ceiling.

Saving heat gets to be pretty important at Ottawa International. Minimum temperatures in December, January and February are nearly always well below zero. Already this year temperatures plunged to 25° below and in the past reached down to 38°.

Dupuis' 22-man crew usually starts snow removal operations in November and is still hard at it in April. They attack an annual average of the white stuff with a mammoth fleet of snow-blowers, plows, dump-trucks, sweepers, sanders, bulldozers, tractors and just ordinary cars and, in the off-season, devote their energies to drainage systems, runway repairs and landscaping.

Predicting when they will be busiest is the job of Anthony Rutkus, Officer in Charge of the Ottawa Weather Office. Be-

sides providing aviation weather data, he and his technicians average about 200 inquiries a day from the Ottawa public. More often than not, Rutkus can report at least some good news. In 1967, for instance, there were only 67 days without some sunshine—usually bright sunshine. Smog is wonderfully infrequent in Ottawa.

#### **Air Services School**

Budding meteorologists are among the students enrolled at Ottawa International's "Airport Campus"—the DOT Air Services School superintended by Arthur A. Johnson. This facility sprawls over the third floor of the terminal building with equipment-packed workshops for beginners and the skilled technicians who are brought to Ottawa for basic and advanced training in air and marine sciences.

Each year about 400 graduates deploy throughout Canada to help man weather stations, control towers, radar rooms and radio communications centers. Recruited regionally by the Public Service Commission (counterpart of U.S. Civil Service Commission) each graduate is returned to a post within his home region and, as nearly as management necessity permits, to the particular assignment of his choice.

Of Ottawa International's varied missions, Dupuis concerns himself first of course with the safety and comfort of air travellers. He also hosts visiting dignitaries, works at balancing his budget, and oversees contract activities. Once in a while, he takes a vacation. How does he spend his time? Visiting airports. What else?



# CAREER ASSIGNMENT PROGRAM

## *Not an easy road to success*



As a member of the Public Service have you ever given thought to whether or not you have the potential for a senior executive position? If you have, did you consider the qualities that would be required for this advancement and the preparations to be made for such an important step?

The Public Service Commission knew there were people within the ranks of the Public Service who were thinking in this direction and that many of them had the wherewithal to get there—that's if they had the chance.

It was for this reason that CAP (Career Assignment Program) was introduced in 1968. It was seen as a major means whereby greater numbers of more effective senior executives could be provided for the Public Service.

And CAP was not introduced as an experiment—a lot of thought had gone into its introduction and there was extensive study of industry and governments at home and abroad. Nor was it seen as an easy road to success. To be successful it had to be a challenge to a man's energy, intelligence and motivation.

### **Not left out**

CAP is a good way to acquire and expand your managerial ability. However, if you are not qualified because of age or salary range to enter the program it doesn't mean you are "out" as far as promotions are concerned. Departmental and occupational systems will continue to advance people who do not participate in the CAP program.

If you are not in a position to meet the criteria now, promotions earned in your job in the near future may enable you to do so. However, it is important that you should

know about CAP, whether or not you are immediately eligible for it. Whether or not you enter the CAP program, the Public Service wants to make sure that the highest skills you have are fully utilized.

In the years ahead managerial skills of the highest order will be needed in the Public Service to solve the problems created by new technology, poverty, urbanization and the changing values of society. The public expects more of the government than ever before and more of what is done must be marked by excellence. That's why it is necessary to find the hidden skills—and one way was through the introduction of CAP.

### **Definite goal**

When a man enters the CAP course, he has to have a definite goal—it's not just another course. He must be out to get broader experience, greater intellectual attainment, wider opportunities to serve the public and what most men desire, a more exciting career.

In CAP everything possible is done to remove the element of chance in a man's advancement. It is essential that the Public Service should get the maximum benefit from the available pool of talent.

CAP participants are selected by their departments on the basis of proven performance and judged potential to become effective senior managers. Each department is consulted on the plans they have for their officers and each participant examines in depth his own career plans.

About 100 potential executives will be selected each year to attend the Career Assignment Management Course. They will be chosen on the basis of their intelligence, motivation, leadership, judgment and abi-

lity to plan, solve problems, make decisions and to communicate.

Those selected for the CAP 12-week "in-residence" management course are officers who have demonstrated high performance before and since entering the Public Service. And even when they have completed the course they can't say they "have it made" for they will be given a variety of planned job assignments to broaden their experience and to test their capabilities for senior executive positions.

Many may think they should be considered for this program, and there's no harm in thinking like that. If an officer feels he meets the criteria he should discuss the program with his immediate supervisor. However, responsibility for identifying prospective candidates rests with senior departmental officials who are familiar with the individual and his performance. Final selections are made by departments.

### **From all departments**

The implementation of CAP permitted departments to select senior officers to participate in the first four courses. Almost all departments are represented in the program and the numbers participating in the full program have increased from 11 in the first to 18 in the second and 28 in the third group. It is expected that the program will account for all 36 places on the course by January 1970.

In the years ahead there will be plenty of room for advancement in the Public Service. Forecasts of retirements and growth indicate about 100 senior executive positions will have to be filled annually. CAP can unlock the doors to these advancements. It will be left to the individual to open them.

# PROGRAMME D'ORIENTATION PROFESSIONNELLE

*C'est un défi; non une carrière facile*

Etant membre de la Fonction publique, vous êtes-vous jamais demandé si vous possédez les aptitudes nécessaires pour occuper un poste de cadre supérieur? Dans l'affirmative, vous êtes-vous demandé quelles étaient les qualités qui pourraient être exigées de vous pour cette promotion et quelle préparation il vous faudrait?

La Commission de la Fonction publique sait fort bien qu'elle compte dans ses rangs des employés qui pensent à ces choses et que nombreux sont ceux qui peuvent accéder à des postes supérieurs, à condition qu'on leur en donne l'occasion.

C'est la raison pour laquelle le PAC (Programme d'affectation des cadres ou Programme d'orientation professionnelle, si vous voulez) a été introduit en 1968. Ce programme est considéré comme un moyen de premier ordre par lequel un nombre plus grand de cadres supérieurs plus efficaces peuvent être assurés à la Fonction publique.

Le PAC n'a pas été lancé à titre d'expérience, car il a donné lieu à une recherche approfondie et à une étude très complète de l'industrie et des gouvernements nationaux et étrangers. Il n'est pas non plus considéré comme une manière facile de réussir. Pour que la réussite soit assurée, le PAC doit constituer un défi à l'énergie, à l'intelligence et aux motivations de l'individu.

## **Pas d'exclusion**

Le PAC est une bonne façon d'acquérir et d'accroître vos capacités de cadre. Cependant, si pour des raisons d'âge ou de traitement, vous n'êtes pas qualifié pour participer au programme, ceci ne signifie pas que vous en êtes exclu pour ce qui concerne votre promotion. Les organismes professionnels et gouvernementaux continuent à faire progresser les fonctionnaires qui ne participent pas au programme PAC.

Même si vous n'êtes pas actuellement en mesure de remplir les conditions exigées, il est possible que les promotions que vous obtiendrez dans un proche avenir vous offrent cette possibilité. Il est tout de même important que vous connaissiez le programme PAC même si vous ne possédez

pas, dans l'immédiat, les qualités nécessaires. Que vous participiez ou non à ce programme, la Fonction publique veut être assurée que la totalité de vos aptitudes est pleinement utilisée.

Dans les années à venir, la Fonction publique aura besoin des plus hautes qualifications pour résoudre les problèmes créés par les nouvelles technologies, la pauvreté, l'urbanisation et les valeurs changeantes de notre société. Les exigences du public à l'égard du gouvernement sont plus grandes que jamais, et les services que ce dernier lui assurent doivent se rapprocher de plus en plus de l'excellence. C'est la raison pour laquelle il est nécessaire de découvrir les dons cachés. Le PAC est une des façons de faire ces découvertes.

## **But précis**

Lorsqu'un employé suit un cours PAC, il est indispensable qu'il ait un but précis. Il ne s'agit pas seulement de suivre un cours de plus. Il doit être à la recherche d'une expérience plus étendue, de connaissances intellectuelles plus approfondies et de plus grandes possibilités de servir le public. Enfin, et c'est ce qu'on recherche tous, il doit être en quête d'une carrière plus intéressante.

Avec le PAC, tous les efforts sont faits pour éviter les éléments de hasard que peut subir la promotion d'un individu. Il est essentiel que la Fonction publique jouisse au maximum de l'ensemble des talents disponibles.

Les participants au PAC sont choisis par leur ministère sur la base de performances reconnues et d'une estimation de leurs capacités à devenir des cadres supérieurs efficaces.

Chaque ministère est consulté sur les prévisions qu'il a établies à l'égard des membres de son personnel et chaque participant examine en profondeur ses propres prévisions de carrière.

Environ 100 cadres en puissance seront sélectionnés chaque année pour suivre le cours d'orientation professionnelle. Ils seront choisis selon leur degré d'intelligen-

ce, leurs motivations, leur aptitude au commandement, leur jugement et leur capacité à planifier, à résoudre des problèmes, à prendre des décisions et à communiquer.

## **Hautes performances**

Les employés sélectionnés pour le cours de gestion de douze semaines du PAC sont ceux qui ont atteint un haut degré de performances avant et après leur entrée à la Fonction publique. Même après avoir terminé le cours, ils ne peuvent pas estimer que «c'est fait», car ils se verront attribuer l'exécution de différents travaux destinés à élargir leur expérience et à éprouver leurs capacités de cadre supérieur.

Beaucoup s'estimeront dignes de considération et on ne peut leur en faire reproche. Si un employé estime remplir les conditions, il se doit de discuter du programme avec son chef immédiat. Par contre, la responsabilité qui consiste à détecter les candidats en puissance relève des fonctionnaires supérieurs du ministère qui ont une bonne connaissance de l'intéressé et de ses capacités. La sélection finale est effectuée par les ministères.

## **PAC intéresse tous les ministères**

La mise en oeuvre de PAC a permis à des ministères de choisir les cadres qui participeront aux quatre premiers cours. La plupart des ministères y sont représentés et le nombre de personnes participant à l'ensemble du programme est passé de 11 dans le premier groupe, à 18 dans le second et à 28 dans le troisième. Il est prévu que le programme comptera un total de 36 personnes suivant le cours en janvier 1970.

Dans les années qui viennent, de nombreuses possibilités d'avancement seront offertes au sein de la Fonction publique. Les prévisions de mises à la retraite et de croissance indiquent, qu'annuellement, environ 100 postes de cadres supérieurs demanderont à être remplis. PAC est en mesure de déverrouiller les portes menant à ses promotions, reste à l'individu le soin de les pousser.



# Une tâche à l'échelle du Canada



## Veiller sur nos voies aériennes

*(Adaptation d'un article préparé par M. Ken M. Parks de la Division des services d'information)*

C'est au ministère fédéral des Transports qu'incombe la responsabilité de veiller sur les voies aériennes qui sillonnent le ciel canadien. Il s'agit d'une tâche à l'échelle du Canada.

En plus de réglementer l'aviation en général au pays, le ministère est également responsable de l'apport et de l'entretien du vaste assortiment d'appareils électroniques nécessaires pour assurer la sécurité de la navigation aérienne.

Afin de faire face à leurs innombrables responsabilités qui s'étendent de Sandspit (C.-B.) à Saint-Jean (T.-N.) et de Toronto à Tuktoyaktuk, les spécialistes de la planification, les inspecteurs, les ingénieurs et les techniciens de la Direction de l'aviation civile des Services de l'Air doivent eux-mêmes prendre l'air.

A cette fin, le ministère dispose de sa propre flotte aérienne composée de 42 avions et de 26 hélicoptères, placés sous le contrôle général de la Division des services de vol, dont l'administration centrale se trouve à l'aéroport international d'Ottawa.

Pour leur exploitation, les aéronefs sont confiés aux six régions des Services de l'Air et aux quatre régions des Services de la marine, les hélicoptères étant presque totalement affectés à des opérations maritimes.

Les avions les plus rapides du ministère sont deux Lockheed JetStars, utilisés pour le transport de hauts dignitaires, pour l'entraînement des équipages et pour la mise au point de méthodes de contrôle de la circulation aérienne à haute altitude. Les deux Viscounts servent aussi au transport de personnages officiels. Ils assurent le transport du premier ministre du Canada, des membres du Cabinet, de chefs d'États étrangers et de hauts fonctionnaires des différents ministères du gouvernement en voyage officiel.

La flotte aérienne du ministère des Transports comprend aussi sept Beechcraft King Airs à turbopropulsion; huit Queen Airs à moteurs à pistons; un Cessna

Super-Skymaster, six Beechcraft D55 Barons; un Beechcraft 56 Baron à turbo-propulsion; cinq De Havilland DHC-2 Beavers et neuf Douglas DC3. La flotte d'hélicoptères se compose de seize Bell 47, Six Bell Jet Rangers, un Sikorsky S61-N et trois Alouettes.

### Naissance de la flotte

La flotte a vu le jour en 1936 lorsque le ministère a été créé et qu'il a pris le contrôle de l'aviation civile relevant alors du ministère de la Défense nationale. A cette époque, on ne possédait que huit aéronefs de divers types. Depuis lors, l'évolution a été directement proportionnelle à l'accroissement des responsabilités qui a accompagné l'énorme développement de l'aviation au Canada.

Alors qu'autrefois la voie ferrée la plus proche devait servir de guide principal au pilote, nous avons aujourd'hui des voies aériennes contrôlées, des aéroports ultramodernes, des aides électroniques à la navigation et des systèmes perfectionnés de communication et de contrôle.

Six King Airs et cinq des DC3 sont utilisés à plein-temps au contrôle de la précision

et du comportement des différentes aides à la navigation aérienne. Ces appareils sont pilotés par des inspecteurs de la Direction de l'aviation civile, qui sont tous des pilotes expérimentés. Des techniciens et des ingénieurs de la Direction des télécommunications et de l'électronique voyagent à bord afin d'assurer l'exploitation de l'équipement électronique complexe dont sont dotés ces avions.

Des Beechcraft Queen Airs sont utilisés par les inspecteurs de l'aviation, les pilotes d'essai et par ceux qui s'adonnent à certaines recherches scientifiques dans le domaine de l'aviation. Les Queen Airs servent surtout à des travaux d'étalonnage, tels que le contrôle des gammes basse fréquence, des systèmes d'atterrissage aux instruments et autres installations de sécurité aérienne. Le bimoteur Cessna Super-Skymaster sert principalement à la reconnaissance aérienne des glaces et à des patrouilles de prévention de la pollution des eaux par les hydrocarbures. Le territoire qu'il survole s'étend du golfe Saint-Laurent jusqu'aux Grands lacs.

Les Beechcraft Barons sont utilisés au transport des inspecteurs dans les tournées incessantes qu'ils font des aéroports du ministère et des aéroports privés, des écoles de pilotage et des aéro-clubs et autres organisations se rapportant à l'aviation et comportant du personnel, des aéronefs ou de l'équipement nécessitant une inspection officielle. Les Beavers sont équipés pour des opérations amphibies qui ont lieu pendant la plus grande partie de l'année. Les inspecteurs peuvent ainsi descendre à des bases d'hydravions éloignées ou à d'autres points d'escale qu'il n'est possible d'atteindre que par hydravion. Leur utilité apparaît particulièrement dans le cas d'enquêtes sur des accidents de l'air ayant pour théâtre des régions d'accès difficile.

### Flotte de la Garde côtière

La plupart des hélicoptères se trouvent aux bases de la marine du ministère ou à bord de navires de la Garde côtière canadienne. Ils servent à des patrouilles de reconnaissance des glaces dans l'Arctique en été, et dans le golfe et le fleuve Saint-Laurent en hiver. Ils sont aussi utilisés au transport de personnel et de cargaisons légères, accélérant ainsi considérablement le ravitaillement et le transfert du personnel de nombreuses îles ou installations côtières d'accès difficile.

Il y a longtemps que les hélicoptères ont prouvé leur valeur dans les opérations arctiques. Autrefois, un brise-glace ou un navire de ravitaillement arctique pouvait se trouver dans l'obligation de rester au large d'un port d'escale pendant plusieurs jours,

attendant qu'un changement de vent et de temps repousse les glaces et lui permette d'envoyer sur la côte des péniches de ravitaillement. De nos jours, il est possible à un navire de passer au large de cette escale sans s'arrêter. Les hélicoptères dont il dispose peuvent rapidement voler à la côte, y déposer du ravitaillement, prendre ou déposer du personnel et être de retour sur le navire alors que celui-ci est encore en vue du point de déchargement.

Les hélicoptères peuvent aussi servir de guides aux convois. Il y a quelques années, le commandant d'un brise-glace choisissait sa route dans la glace à l'aide de renseignements fournis par des vigies. Maintenant, le commandant envoie un officier expérimenté dans l'hélicoptère afin d'effectuer des reconnaissances jusqu'à 15 ou 20 milles en avant du navire à la recherche de la route la plus facile. De ce fait, le convoi peut poursuivre son déplacement avec une perte de temps minimale, réalisant ainsi une économie importante de combustible.

### Opérations septentrionales

Au cours des opérations septentrionales, on utilise fréquemment les hélicoptères pour le transport d'Esquimaux depuis la côte jusqu'au navire de patrouille arctique, le n.g.c.c. C. D. Howe. Ce dernier est spécialement équipé pour prodiguer des soins médicaux à la population indigène.

Sur la côte ouest, un hélicoptère Sikorsky S-61N à double turbopropulseurs, avec une capacité de 26 passagers et une autonomie de 500 milles, est attaché à la base de la marine du ministère à Prince-Rupert. En cas de nécessité, cet appareil est utilisé pour les recherches et le sauvetage, comme le sont, d'ailleurs tous les hélicoptères du ministère.

Indépendamment des hélicoptères affectés aux navires de la Garde côtière canadienne, dix sont spécialement attachés à des bases pour des travaux tels que le transport des techniciens et des équipements nécessaires à l'entretien et à la réparation de phares et d'autres aides à la navigation. Ces appareils sont stationnés à Prince-Rupert, Victoria, (deux); Parry Sound, (Ont.); Québec, Sorel, Saint-Jean (N.-B), Charlottetown, Dartmouth, et Saint-Jean (T.-N.)

En plus de satisfaire d'abord à ses propres besoins, le ministère fournit des hélicoptères et leurs équipages pour aider aux travaux du ministère de l'Energie, des Mines et des Ressources. Ces unités sont stationnées à bord du navire hydrographique Baffin.

Les aéronefs des Transports effectuent près de 27,000 heures de vol par année.

L'entretien courant et les changements éventuels de moteur sont effectués aux bases régionales des Services de l'Air à Moncton, Montréal, Toronto, Winnipeg, Edmonton et Vancouver. Le personnel de ces bases est composé d'un mécanicien-contremaître d'aviation, et de plusieurs mécaniciens d'aviation brevetés. Cependant, les révisions importantes de cellule et les changements de moteur sont effectués dans le hangar principal du ministère à l'aéroport international d'Ottawa. Ce bâtiment constitue un point de repère unique en son genre dans la région d'Ottawa du fait de sa toiture inversée. Sa vaste surface intérieure utile, capable d'abriter une flotte entière d'appareils, a été rendue possible par l'adoption d'une conception supprimant toute colonne de support dans la zone de travail. Les fermes supportant la toiture dépassent nettement celle-ci et donnent au bâtiment l'apparence inhabituelle d'une construction non terminée.

Les ingénieurs et techniciens d'entretien des aéronefs, ainsi que le personnel de l'atelier d'électronique et de radio-électricité, conservent un niveau élevé de connaissance en participant aux cours dispensés par les écoles de formation des lignes aériennes et des constructeurs d'aéronefs. Ces cours, dispensés également par le ministère, englobent toutes les phases des travaux intéressants les aéronefs à voilure fixe et tournante.

L'effectif de la Section des opérations de vol d'Ottawa totalise 232 personnes, dont 21 pilotes de transport d'officiels et 21 pilotes d'hélicoptère.

### Services aériens spéciaux

Le hangar du ministère des Transports, situé à l'aérodrome international d'Ottawa, abrite tous les équipements et les installations de la Section des opérations de vol, les magasins et les ateliers de réparation d'aéronefs et d'équipements radioélectriques. Il y a un atelier de révision d'hélicoptères, des salles de cours et le personnel administratif nécessaire à l'exploitation de la flotte aérienne. Exception faite de ces services aéronautiques spéciaux, le ministère dispose d'un simulateur de vol qui est un dispositif d'entraînement utilisé par son personnel volant pour se perfectionner dans le vol aux instruments et maintenir ses qualifications au niveau le plus élevé.

Etant donné que le ministère doit se tenir au fait de tous les progrès dans l'aviation, le travail d'évaluation des nouvelles procédures de vol, des aéronefs et des équipements n'est jamais terminé. Avec sa flotte d'excellents appareils, et le personnel technique spécialisé dont il dispose, le ministère des Transports assure cette tâche en apportant tout son soutien à l'industrie de l'aviation au Canada.





**LA RÉPONSE DE L'ORDINATEUR**—M. Jim Arsenault, au centre, ingénieur à la Direction des télécommunications, photographié en compagnie de deux opérateurs principaux, MM. Gunther Remmer et Paul Brisson, devant une imprimante qui tape à la vitesse de 1200 lignes à la minute un rapport basé sur la formule 40-0092.

**WHAT DOES IT SAY?**—Radio communications engineer Jim Arsenault, Telecommunications, checks the print-out of Form 40-0092 on the 1200 line-a-minute high speed printer with two senior operators, Gunther Remmer and Paul Brisson.

## “40-0092” n’est pas un espion

(Adaptation d’un article préparé par A. Victor Bushe, de la Division des services d’information)

«40-0092» n’est pas le code d’un espion, c’est le numéro d’une formule. Pourtant, lorsque cette feuille de papier a paru pour la première fois dans les bureaux du Ministère, il y a quelque trois ans, plusieurs ont pensé qu’il s’agissait d’une forme d’espionnage. Lorsque le système de rapports sur les pannes d’équipement électronique a commencé à être appliqué par la Direction des télécommunications et de l’électronique, 40-0092 était suspecte. «Il s’agit certainement d’un espion électronique quelconque», se disait-on.

Aujourd’hui, les techniciens en électronique qui utilisent le système et la formule depuis trois ans savent que 40-0092 n’est pas un espion, ni une chinoiserie administrative. Ils ont constaté que le système va droit au but et a eu un effet marqué sur l’entretien préventif des appareils électroniques.

Avant la mise en application du système, les rapports concernant les installations électroniques mettaient de un à trois mois pour atteindre les bureaux régionaux puis le bureau central, tout en prenant plusieurs

heures sur le temps d’employés spécialisés. A mesure que s’accroissait le nombre des installations électroniques, le besoin d’une méthode précise et rapide de communication des rapports sur ces installations se faisait évidemment sentir.

### Une nouvelle conception

Lorsqu’il y a quelques années, la Direction des télécommunications et de l’électronique décida d’améliorer son système de rapports sur les pannes des installations électroniques de son ressort, on convint qu’une conception totalement différente de ce système serait nécessaire. Il devenait indispensable de supprimer le genre de rapports chronophages qui existait alors.

Aux premiers jours de l’installation des appareils électroniques dans les services gouvernementaux, différentes formules étaient utilisées pour faire rapport sur ces appareils. Il en existait une pour les installations de radar, une autre pour les télécommunications, une troisième pour le matériel de la marine, etc. Cependant, aucune forme de rapport n’existait pour

quelques-unes des installations les plus importantes. La Direction voulait donc changer tout le système et, en même temps, elle voulait obtenir plus de détails sur les causes des pannes. Elle voulait particulièrement savoir quels étaient les composants défectueux et quelle était la durée des périodes hors service. Jusqu’alors, la Direction ne recevait aucun de ces renseignements.

Ainsi donc, on a mis en vigueur le système de rapports sur les pannes. Un ordinateur du ministère des Transports, de type IBM 360/30, a été mis en service pour traiter automatiquement les données reçues sur les formules 40-0092. Ce système est conçu pour enregistrer les pannes de composants dans les installations ainsi que des renseignements supplémentaires sur la cause de la panne et les mesures prises pour y mettre fin.

Le principe du système est très simple. Lorsqu’un appareil tombe en panne ou fonctionne mal, on examine l’appareil et, après réparation, les techniciens affectés à



**LES SURVEILLANTS ÉTUDIENT LES RAPPORTS**—*Les surveillants Gilbert Lavigne, du contrôle des données, et Betty Woods, des opérations, étudient les rapports reçus sur le téléimprimeur au cours de la nuit précédente.*

**DISCUSSING OPERATIONS**—*Supervisors Gilbert Lavigne, data control, and Betty Woods, operations, discuss console typewriter reports from night shift production.*

l'entretien envoient un rapport, sur formule 40-0092, au centre de traitement des données. Les renseignements contenus dans la formule sont transcrits sur des cartes perforées qui sont introduites dans l'ordinateur. Celui-ci, étant spécialement programmé, trie les renseignements et donne des rapports imprimés, sur demande. Ces rapports sont alors renvoyés par la poste aux bureaux régionaux puis aux utilisateurs.

#### **Rapports à tous les échelons administratifs**

Grâce à ce système, les stations n'ont plus à envoyer de rapports aux bureaux régionaux, ni ceux-ci, au bureau central, puisque l'ordinateur établit lui-même des rapports à l'intention des différents échelons administratifs du Ministère.

La formule 40-0092 n'a rien de compliqué. La première partie, qui constitue la description de la panne, permet d'identifier de façon claire et précise l'installation défectueuse et de donner des détails sur la durée de la panne, sa cause et ses effets sur le service.

La deuxième partie de la formule, qui concerne la réparation, permet au technicien de mettre en évidence les raisons techniques de la panne. Le personnel du Ministère peut ainsi déceler les défauts de conception des appareils et connaître les pièces ou ensembles d'éléments qui posent trop souvent des problèmes d'entretien.

L'ordinateur peut immédiatement déduire de la formule 40-0092 le chiffre d'hommes-heures consacré à la réparation de chaque type d'appareil. Ce chiffre constitue une indication valable sur les travaux d'entretien effectués d'urgence ou en

dehors du temps prévu à cette fin, pour chaque type d'appareil. Les formules et leur analyse par l'ordinateur permettent aux directeurs et aux techniciens d'avoir à leur disposition des renseignements sur le fonctionnement des installations de leur région et de les comparer périodiquement à ceux des autres régions.

Les renseignements sur les pannes de n'importe quel type d'élément, une fois transcrits sur cartes perforées et enregistrés par l'ordinateur d'Ottawa, prennent une forme très utile à de nombreux directeurs, techniciens et directions du Ministère. Ainsi, le contrôle de la circulation aérienne peut très facilement avoir des renseignements sur le fonctionnement de toutes les installations des tours de contrôle et la section des voies aériennes peut savoir comment fonctionne l'équipement électronique installé à bord des avions. Ces renseignements enregistrés par l'ordinateur sont à la disposition de tous les services du Ministère qui utilisent des appareils électroniques.

#### **Une importance de premier plan**

Bien que le premier objectif du système de rapports sur les pannes d'équipement électronique soit de réduire la durée des interruptions de fonctionnement, on a constaté que remplir la formule 40-0092 fait maintenant partie des fonctions du technicien en électronique presque tout autant que la réparation des appareils.

Le Ministère emploie quelque 900 techniciens dans ce domaine et, chacun d'entre eux présentant en moyenne deux rapports par semaine, 1800 rapports au total sont introduits dans l'ordinateur d'Ottawa hebdomadairement.

Dans l'ensemble, les objectifs du système se résument comme il suit:

1. Le système fournit des données sur les pannes des installations électroniques du Ministère, pour analyse locale et centrale.
2. Il permet de tenir à jour des dossiers de pannes pour chaque installation électronique.
3. Il accélère l'acheminement et la distribution des renseignements.
4. Il réduit le volume de la paperasserie administrative.
5. Il fournit aux directeurs des données pour les besoins de la planification.

*Ups!*

*&*

*Downs!*

Say what you like about elevators—they have their ups and downs. Some of 'em zoom up into the stratosphere so fast you get nosebleed; in others you can grow old between floors.

In winter they're gloomy little cubicles straight out of Edgar Allan Poe. In summer they're sauna baths. When you want to go up—they're all going down.

In short, they're a pain in the neck—and if you don't believe that look around next time you're in an elevator and see all the necks craning up at the floor number panel.

*Bell News*





**ASSIGNING WORK**—Mrs. Ann Melvin, supervisor of key punching and verifying section, is seen assigning work to one of her 25-unit operators.

**DISTRIBUTION DU TRAVAIL**—Mme Ann Melvin, surveillante de la Section de perforation et de vérification, donnant du travail à l'une des opératrices de son service.

## "40-0092" tells the whole story

by A. VICTOR BUSHE  
Information Services Division

"40-0092" is not a spy although when this piece of paper first made its appearance on department desks about three years ago some people thought it might be. At the time the Facility Availability and Equipment Failure Reporting System was introduced by the Telecommunications and Electronics Branch, some were inclined to view 40-0092 with suspicion—"an electronic spy of some sort".

Now that department electronic technicians have been using the system—and Form 40-0092—for three years they find that it's neither a spy nor a complicated piece of government bumf. It is something that they have found to be straightforward and a system that has been having a marked effect on preventative maintenance of electronic equipment.

Before the introduction of the Facility Availability and Equipment Failure Reporting System, reports on electronic facilities took anything from one to three months to reach regional offices and headquarters—and a good number of skilled man-hours to get them there. As the quantity of electronic facilities rapidly increased so did the necessity for an accurate and speedy completion of reports on the facilities.

### New approach

A few years ago when the Telecommunications and Electronics Branch of the de-

partment decided to improve the availability reporting system of the electronics facilities within its orbit, it was recognized that a completely new approach would be necessary. It was essential that those time-consuming reports must go.

In the earlier days of electronic facilities in use in the government service, various formats were used when reporting on the different electronic facilities. One type of report was submitted for the radar facilities, another type for communications, another for marine equipment and so on. However, reports were not being received on some of the more important facilities. The Branch wanted to change this and find out more about the causes of failures, including what components were failing and to determine the duration of outages. This was information the Branch didn't receive at that time.

And so, about three years ago, the Availability Reporting System was introduced, the D.O.T. IBM 360/30 computer being installed in Ottawa and utilized for the automatic processing of the information received on Form 40-0092. This system was devised to record component failures in equipment, additional information on the cause of the outage, and what action had been taken to correct it.

The principle of the system is quite simple. When equipment fails and/or there is



**BEAUTY AND THE TAPES**—Here Joanne Bailey shows how easy it is to find tapes in the steadily expanding magnetic tape library. The tapes are clearly numbered and identified in an ultra-modern method of hanger bar units.

**UNE COLLECTION BIEN FOURNIE**—La jolie Mlle Charmer démontre la facilité d'accès à la collection de bandes magnétiques, qui ne cesse de s'enrichir. Les bobines, clairement numérotées et identifiées, peuvent être retrouvées en quelques instants, grâce à une installation fort ingénieuse.

an impairment of service, an investigation is made. Following restoration a report is submitted by the station technical staff on 40-0092 to the data processing centre. This information is transposed on punched cards and the computer programmed to sort and print out the information in reports as may be required. This information is then mailed back to the region and user.

#### For all levels

With the introduction of this system, reports from station to region or region to headquarters were no longer necessary as the computer printed the appropriate readouts for all levels of the department.

Form 40-0092 is not a complicated report. The top portion, the Availability Report, gives a straightforward account of the system involved, the duration of the outage and the cause and effect on service.

The Failure Report, the lower portion of the form, allows the technician to pinpoint the specific cause of the failure of equipment, and permits department personnel to discover design faults, and locate the components or units that are causing excessive maintenance problems.

From Form 40-0092 a readout of repair man-hours can be readily made for each type of equipment. This is a valid indication of the amount of emergency or non-scheduled maintenance required on that particular equipment. Through reports and readouts managers and technicians are able to review the performance of all facilities in their own region, and at regular intervals compare it to the performance of facilities of other regions.

Once the information on any type of component failure is placed on the data cards and is stored in the memory of the Ottawa computer it takes a form which can be of considerable use to many managers and technicians and many branches of the department. For instance, Air Traffic Control can readout performance of all tower facilities, and Airways can see the overall performance of electronic equipment on aircraft. This information stored by the computer is available to all department users of electronic equipment when they desire to have it.

#### Vital function

Although the prime requisite of the Availability Reporting System is the reduction of "down time" of electronic facilities, it has been found that the completion of Form 40-0092 is now as much a part of the electronic technician's duties as the repair of the electronic equipment.

The department has about 900 technicians in the field and with each of them submitting on the average two reports each week a total of 1,800 reports reach the computer every week in Ottawa.



**QUEEN OF D.O.T.**—Wendy Pritchard, an 18-year-old stenographer with the Staff Relations section of Personnel in Ottawa, was chosen this year to hold the title of Miss Department of Transport. The judges chose Wendy out of a group of 10 girls. There were 66 girls nominated for the contest. The first princess is Mary-Ann Laird, and the second princess, Margaret Todd. Wendy enjoys swimming, sewing, skating, dancing and reading.

**REINE DU MINISTÈRE**—La jolie Wendy Pritchard, sténo de 18 ans attachée aux Services du personnel, à Ottawa, est la candidate du ministère des Transports au concours pour le choix d'une reine de la fonction publique. Des 66 participantes au concours, Mlle Pritchard était une des dix finalistes. Les deux princesses choisies à la même occasion sont Mlles Mary-Anne Laird et Margaret Todd. Les passe-temps favoris de Wendy sont la natation, la couture, le patinage, la danse et la lecture.



# Ends half-century of Great Lakes service



by THOMAS E. APPLETON  
*Department of Transport  
Marine Historian*

*From June 6, 1915, when she was commissioned, until Dec. 18, 1968 when the order was given to abandon ship, CCGS Grenville made a yeoman contribution to the marine service of Canada.*

The career of the *Grenville*, built in 1915 and lost in 1968, covers an interesting phase of inland water development and made a notable contribution to it. Shortly before the vessel was put into service, the St. Lawrence canals were dredged to 14 feet, and traffic was on the increase. Lake vessels had increased greatly in size by the time the Welland Ship Canal was built—it had achieved a depth of 22-feet by 1932—and the fulfilment of a long cherished dream came in 1959 with the opening of the Seaway.

At the start of this period of development, the Department of Railways and Canals was responsible for aids to navigation in the section from Montreal to Kingston. For this they used two wooden streamers, the *Scout* and *Reserve*, to handle the buoys. Elsewhere in the Great Lakes, the Department of Marine and Fisheries employed chartered steamboats to supply the lights and maintain the buoys and spars. In 1903 Marine and Fisheries took over the entire system, fell heir to the *Scout* and *Reserve*, and established depots at Prescott and Parry Sound shortly afterwards. In 1909 they built two new buoy tenders, the *Lambton* and *Simcoe*, to handle the Upper Lakes work. It was soon found that the *Scout* and *Reserve*, harbour tugs in all but name, were unsuitable for Lake Ontario and a new vessel was ordered.

## Great success

Named after the County of Grenville on the Ontario shore of the St. Lawrence, the new ship was a great success. She was built by the Polson Ironworks of Toronto, a firm now long defunct, which had an excellent record in production of ships and marine machinery for the department, including the 22-knot Fisheries cruiser *Vigilant* in 1904 and a number of self-propelled lightships. The *Grenville* was a steel single-screw steamer of handy size, 155 feet, and was fitted with a triple expansion engine taking steam from two marine boilers under forced draft.

Commissioned on June 6, 1915, the *Grenville* spent her first season between Prescott and the Niagara River, a period which was interrupted by her being rammed on the port quarter by the tug



**TWO OLD STAGERS**—*The Grenville spent the winter of 1924-25 stranded on Burton Bank, near Parry Sound, after grounding in a snowstorm. Refloated in the spring, she was patched up and towed to Collingwood for refit. The job was done by Mr. Blythe, who chartered the tug Hellen S. for the purpose from Captain Graham at Little Current. This tug, shown in this picture and still afloat at Toronto, was eventually converted to diesel and is owned by Canada Dredge and Dock. (Parry Sound & Marine Agency photo).*

**IL S'ÉCHOUE DANS LA BAIE GEORGIENNE**—*C'est au cours d'une tempête de neige, en 1924, que le Grenville s'est échoué, la première fois, dans la Baie Georgienne, près de Parry Sound. Il a été renfloué au printemps de 1925 et ramené aux chantiers de Collingwood à l'aide du remorqueur «Hellen S.» Ce remorqueur, dans la photo à gauche, est encore en usage, aujourd'hui. Il est la propriété de Canada Dredge and Dock. (Photo obtenue de l'Agence de la marine de Parry Sound).*

J. C. Stewart, when alongside a dock at Toronto. The repair job, at the expense of the tug owners, took most of the ensuing winter. In 1916 the *Grenville* handled all the work from Prescott to Presqu'île, including the building of the Burnt Island Light, and finished a long season when she took off the keeper of the Main Duck on December 29.

A change in this routine came about in 1917 as a result of a tragic loss. The CGS *Simcoe*, which had been ordered from Parry Sound to Saint John, N.B. to relieve the CGS *Dollard* on that station, was lost with all hands. Working her way through the Quebec Agency, she had lifted the Magdalen Island buoys and on December 6 was overwhelmed in a severe snowstorm. The *Dollard* sailed for Parry Sound as intended but, proving unsuitable, was relieved by the *Grenville* in 1918.

#### Tragedy strikes again

The Parry Sound Agency was worked by the two vessels, *Grenville* and *Lambton*, until April 1922, when tragedy again struck, this time the *Lambton* being lost with all hands. This disaster was particularly tragic as the *Lambton* was taking the Lake Superior lightkeepers to their stations and was lost without trace near Caribou Island.

The *Grenville* continued to be employed at Parry Sound without incident until December 6, 1924, when she was stranded on

the Burton Bank while making for Byng Inlet, Georgian Bay, in a snowstorm.

Unable to see the range light because of the weather, Captain Smith was anxiously trying to pick up the flash of Gereaux Island when the vessel struck. And no wonder the light was invisible—it was out. Not in the best of humour, the master of the *Grenville* landed by boat, climbed up to the light, and was met by the astonished keeper, who approached from the other side.

It was disclosed that the light had flickered out when the keeper, who lived alone on the island, ran out of food and, in danger of starving, had gone to the nearest town for supplies. He was subsequently fired and one cannot help having some sympathy for a man who had worked under conditions which would not be tolerated today.

#### Badly holed

The next problem was to get the *Grenville* off the reef but, racing against freeze-up without success, the crew had to abandon ship on December 11. Badly holed and partially flooded, the wreck lay there until early spring, when a salvage party from Collingwood Shipyards put pumps aboard, repaired the damaged tank tops and, lighting the vessel in every possible way, succeeded in towing her off to drydock in May 1925. There she remained under refit until September.

Returning to service at Parry Sound for the remainder of the season, the *Grenville* stayed in the Upper Lakes until 1931, when the CGS *St. Heliers*, a Saint Class tug which had been purchased by the department and lengthened by 60 feet, was converted to a lighthouse and buoy vessel for the Parry Sound Agency. Back at Prescott again, the *Grenville* resumed her original role and the *Scout*, by then showing signs of age, was phased out of service.

In those lean years of the 'thirties, life in the Marine Service reflected the general malaise which lay heavily on Canada and the world. Correspondence of the period is revealing. A request for four dozen lamp bulbs for the *Grenville*, complete with full explanation why they were needed, formed the subject of a letter from the agent to the deputy minister. In March 1935 the main engine overhaul cost only \$257.25 and deck repairs were \$656.25. To those familiar with the *Grenville* there is a knowing ring about reports that the wooden decks were leaking above the accommodation and required to be painted and canvassed.

#### Mutual agreement

Jobs were hard to get during the Depression and were largely dependent on political patronage. Crews were quite openly engaged from a roster drawn up in local constituencies; those in the control of oppo-



AT THE END—*Sunk after being crushed in the ice on December 18, 1968, only the mastheads of the CCGS Grenville are visible.*

FIN DRAMATIQUE—*Le 18 décembre 1968, le Grenville, en panne et coincé dans la glace dans la région de Beauharnois, est allé s'écraser contre un pont et a par la suite coulé à pic dans quarante pieds d'eau. C'était donc la fin d'un navire qui a rendu de fiers services à la navigation au pays pendant de nombreuses années.*



sition members of Parliament were allocated a proportion agreed on mutually with colleagues on the Government benches.

So rigid was the system, that at one time special arrangements had to be made when two men were required for boiler cleaning. The boilers of the *Grenville* being small, combustion chambers were very cramped and only the smallest of men could work there safely. Of several boiler scaling labourers available on that occasion, it was two with political preferment who got the job.

It was something at that time to be a small Liberal or a small Conservative; better still to be a tiny Liberal or a tiny Conservative! Over the years both must have crawled impartially up the back ends of the *Grenville*'s boilers.

The first master of the *Grenville*, whose name appears on the original certificate of registry, dated July 9, 1915, was Captain Henry Esford. From then until 1930 the ship was commanded by Captain Dick

Smith and possibly others. Thereafter the list runs:

Captain	M. Barry	1930-42
"	J. Patchell	1942-46
"	E. Parrish	1947
"	O. Morphet	1948-62
"	J. Gallant	1962-64
"	A. Moreau	1964-65
"	A. Croft	1965-66
"	R. Blagdon	1966
"	B. Dube	1966
"	J. Young	1967-68
"	D. Creaser	1968

#### Honourable end

After a long and successful career of hard work in servicing the aids to navigation of the Great Lakes, it was certainly in character that the *Grenville* should meet an honourable end in the work for which she had been intended. Unlike merchant vessels, ships of the Canadian Coast Guard must, on occasion, be placed in situations of some

navigational risk; without this it would be impossible to safeguard the navigation of others.

On December 17, 1968, while attempting to recover buoys in the Beauharnois area, the *Grenville* was caught in a narrow reach, with the current sweeping massive ice downstream. This in itself was not unusual but, with increasing density and pressure, condenser trouble resulted. With both anchors down and the engines making maximum possible revolutions, the *Grenville* hung on grimly for the ensuing 24 hours or so and Captain Creaser was constantly on the bridge.

Early on the morning of December 18, despite the best efforts of all, the unrelenting ice took charge and the ship was dragged downstream. With great coolness and judgment, all hands were able to escape without injury as the end came when the *Grenville* was swept remorselessly against the abutment of a bridge. It was a triumphant ending to a period of great danger.

# appointments

## Dr. Derek Scafton

Dr. Derek Scafton was appointed recently Chief of the new Urban Transportation Development Division of the Transportation Policy and Research Branch in the department. Dr. Scafton's duties include the development of the department's program to undertake and sponsor research and experimentation in urban transportation.

Establishment of the new urban transportation unit is part of a plan to encourage the development of a rational approach to solving the transportation problems of Canadian cities.

Dr. Scafton, 31, is a native of Darlington, England. He holds degrees of B.Sc. and Ph.D. from the University of London, the latter for a study of the characteristics and problems of public transportation in metropolitan areas. He joined the government service in 1966 as an economist in the Department of Transport. His work in this post included specialized studies in road transport regulations, the inter-city bus industry and the impact of regulatory change on the road transport industry.

## M. Derek Scafton

M. Derek Scafton, âgé de 31 ans, vient d'assumer ses nouvelles fonctions au ministère comme chef de la Division du transport urbain à la Direction des méthodes et des recherches en matière de transport.

Cette nouvelle division a été créée en vue de l'élaboration d'un programme qui permettra d'aborder de façon rationnelle les problèmes du transport dans les villes canadiennes.

M. Scafton est natif de Darlington en Angleterre. Il détient un baccalauréat en sciences ainsi qu'un doctorat de l'Université de Londres. Sa thèse de doctorat a porté sur une étude des caractéristiques et des problèmes de transport public dans les régions métropolitaines. Il est entré au ministère des Transports en 1966 à titre d'économiste des routes.



Dr. Derek Scafton



John N. Ballinger

# nominations

## John N. Ballinger

John N. Ballinger, formerly Chief of Aids to Navigation Division in the department, was recently appointed to the post of Associate Director, Marine Works. In this position he is responsible for the aids to navigation and canals activities of the department.

Mr. Ballinger is responsible also for directing the program of developing new concepts, policies and standards for aids to navigation and canals with which he had been closely associated as Chief, Aids to Navigation and formerly as Chief, Canals.

Born in Toronto, Mr. Ballinger served overseas in the Second World War as a squadron leader in the Royal Canadian Air Force and graduated as a civil engineer from the University of Toronto.

Following three years in the construction of Toronto's subway, he joined the Aids to Navigation Division of D.O.T. in 1953. He was promoted to district engineer in the Dartmouth marine agency in 1958 and was made district marine agent in 1960. In 1962, he returned to Ottawa, having been promoted to Chief, Canals Division. In 1965, he was appointed Chief, Aids to Navigation.

## Directeur associé

M. John N. Ballinger, ci-devant chef de la Division des aides à la navigation, vient d'assumer ses nouvelles fonctions à titre de directeur associé des Travaux maritimes.

M. Ballinger, ancien agent régional de la marine à Dartmouth (N.-É.), est particulièrement chargé des services du ministère se rapportant aux aides à la navigation et aux canaux. Il a également déjà été chef de la Division des canaux.

Le directeur des Travaux maritimes, M. Walter Manning, demeure responsable de la Division des ports et des biens. Ainsi secondé dans ses tâches par un directeur associé, M. Manning sera en mesure d'accorder plus d'attention à l'élaboration de nouvelles lignes de conduite en matière d'administration portuaire au Canada.



## C. S. Baldwin

A veteran of government service dating back to 1925, C. S. Baldwin, Toronto area manager for the Telecommunications and Electronics Branch, was honoured by his associates at a dinner in Toronto on April 2.

Mr. Baldwin could tell many an interesting tale of his experiences as a radio operator at the remote Belle Isle station and on Nottingham Island in Hudson Bay in the days before he was transferred to the relatively comfortable life at Toronto.

He first was a radio operator in the East Coast marine service, later spending one season at Belle Isle and two at Nottingham. He became first Officer in Charge of the Toronto radio range station in 1938 and in the years that followed rose through the ranks to become area manager.

When he first was in charge at Toronto, the staff numbered four. At the time of his retirement, he had a staff of 80.

Following dinner at the Cambridge Motor Hotel, Mr. Baldwin was presented with a portable television set, W. R. (Buzz) Butler, regional controller of telecommunications, officiating at the presentation. He also received an illuminated scroll, signed by Deputy Minister O. G. Stoner and presented by H. J. Williamson, Director of Telecommunications and Electronics Branch, on behalf of Mr. Stoner. There was a bouquet to take home to Mrs. Baldwin, the affair being a "stag".

Boris Borodczak, Regional Superintendent of Maintenance and Operations, was master of ceremonies. Also present were D. P. Glen, Regional Director of Air Services, Earl F. Porter, Chief, Maintenance and Operations, from Ottawa headquarters, senior regional officials, many staff members and representatives of a number of air lines.

## C. A. Brethour

Canadian winter holds no terrors for Cliff A. Brethour, formerly in charge of regulations enforcement for Civil Aviation at Ottawa headquarters. Now retired, Cliff, his wife and daughter Cindy are living in Anna Maria, Florida. A son and daughter still reside in Ottawa.

A veteran of overseas service with the RCAF in the Second World War, he joined the department in Toronto in 1944 and was transferred to Ottawa in 1953. When he retired, due to failing health, he was honoured by his Civil Aviation confreres at a staff gathering at the RCAF Officers' Mess and a presentation made to him.



**TOTAL OF 169 YEARS' SERVICE—** *These four men, all retired after long service with the Telecommunications and Electronics Branch of the department are pictured at the testimonial dinner in Toronto on the occasion of Mr. Baldwin's retirement. From left: H. H. Gloucester (36 years); G. Phelps (46 years); C. S. Baldwin (44 years); G. Rose (43 years).*

**169 ANNÉES DE SERVICE—** *C'est le total des années que ces quatre anciens employés du ministère ont consacrées à la Direction des télécommunications et de l'électronique. La photo a été prise à Toronto lors d'une fête organisée au départ de M. C. S. Baldwin. De gauche à droite, on voit H. H. Gloucester (36 ans); G. Phelps (46 ans); C. S. Baldwin (44 ans); et G. Rose (43 ans).*



William George



Gordon Stanley

## Long service of Gander employees

Two employees with many years of service in the Telecommunications and Electronics Branch retired at the end of last year at Gander.

William George, who had served for 26 years as a communicator and clerk, retired

on Nov. 12, 1968. J.G.T. (Gordon) Stanley, with 31 years' service, retired Nov. 29, 1968.

Mr. George and Mr. Stanley were honored at a joint party at the Canadian Legion Club, where they received gifts and the good wishes of friends and coworkers.

# TRANS-CANADA



**PROCESSING OF FISH**—*The frigate Stonetown, one of two ships which are to be fish processing plants for a Vancouver company. The other vessel is the St. Stephen. When the vessels return to port after a catch there will be packaged fish ready for distribution.*

**NAVIRE AUX POISSONS**—*Le Stone- town, ancien navire de la Garde côtière canadienne, sera transformé en usine servant à l'apprêtage du poisson pour le compte d'une entreprise de Van- couver. Le même sort est réservé au St. Stephen.*



Capt. C. M. Seeley

## Pilotage service officer dies

**Vancouver**—The death occurred suddenly in Vancouver April 20 of Captain Clifford M. Seeley of the Department of Transport's pilotage service. Aged 54, he was Superintendent of Pilots in the Victoria, B.C. District, a position he had held for about three years.

A native of Newfoundland, Captain Seeley was highly respected in the pilotage service at headquarters in Ottawa and in the Maritimes and Pacific areas. He had an extensive sea-going career with the Canadian Merchant Navy and saw service in the eastern waters. He was with the Canadian National Steamship's crack "Lady" ship, the "Lady Nelson", when she was tor-

pedoed in the harbour of Castries, St. Lucia, B.W.I. in the early days of the Second World War.

Captain Seeley served as Chief Officer of the "Lady Nelson" from 1943 to the end of the war, when the vessel was salvaged and converted into a hospital ship.

A graduate of Mount Allison Academy, Sackville, N.B., he obtained his Master's Certificate (Foreign Going) in 1943. He joined D.O.T. at the termination of hostilities as instructor at the Navigation School at Yarmouth, was appointed Examiner of Masters and Mates at Ottawa in 1955 and the following year became Assistant to the Supervisor of Pilotage for the department. He also acted as Harbour Master at Goose Bay, Labrador, during navigation seasons in the 1950's.

Captain Seeley is survived by his wife, Moiré, a son, Christopher and a daughter Susan.

## Air traffic experts

**Montreal**—Air traffic controllers from Europe, the U.S. and South America, as well as from across Canada, will attend an international convention of controller associations in Montreal in May, 1970.

It will be the ninth annual conference of the International Federation of Air Traffic Controllers' Associations, and it will mark the first time IFATCA holds its convention outside Europe.

About 400 delegates, including wives, will attend the conference, to be held from May 11 to 16 at the Queen Elizabeth Hotel. Theme of the conference will be the "computer and the controller."

## Dedicated service

**Winnipeg**—The death occurred on February 21 of Miss Joan O'Brien who had worked in the Winnipeg Weather Office for 27 years.

Following her graduation with a science degree from the University of Manitoba, Joan joined the Meteorological Service of Canada in 1942. She was one of the first women accepted and trained for professional work as a Meteorological Officer.

Throughout her working career, she was a highly respected and indispensable member of the Winnipeg Weather Office staff. As a result of her dedicated service, she made an outstanding contribution to the efficiency and welfare of the Meteorological employees at Winnipeg Airport in her capacity of Administrative and Technical Assistant to the Officer-in-Charge. In addition, she applied her comprehensive knowledge of meteorology to serve the community and the region at large as a competent climatologist.

## Hydrographers meet

**Victoria**—The 8th annual Canadian Hydrographic Conference was held in Victoria from March 3 to 7. About 35 hydrographers from across Canada and 30 more from the Victoria Hydrographic Surveys office took part in the five-day conference. It was the first time the conference was held in Victoria. On March 4 the group toured the CCGS *Vancouver*. An oceanographic display was set up on the weathership and the work was demonstrated by oceanographers.



# Suggestions bring them awards



**HIS SUGGESTION PAYS**—James T. Nichols, *right*, of Moncton, N.B. receives his \$500 award from H. M. Hutchon, *Regional Director, Air Services, Moncton*.

**\$500 POUR SA SUGGESTION**—M. James T. Nichols, *à droite*, de Moncton (N.-B.), reçoit sa prime de \$500 pour une suggestion qui permettra au ministère d'économiser quelque \$14,000 par année. La présentation du chèque est faite par le directeur régional des Services de l'Air, M. H. M. Hutchon.

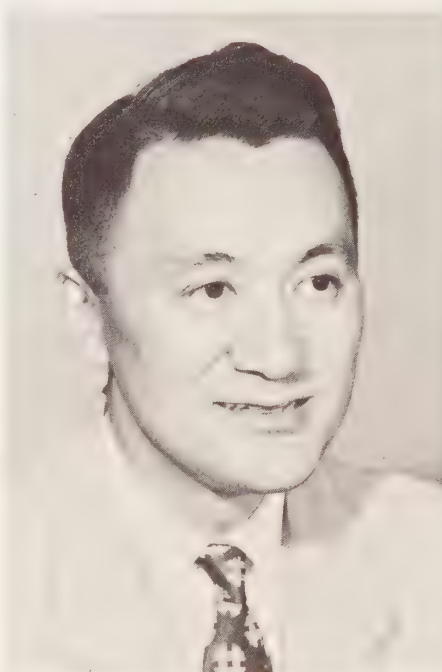
A technician employed in the Atlantic Region of the department, James T. Nichols of 179 Leslie Street, Moncton, N.B. was granted an award of \$500 by the Air Services Suggestion Award Committee. It was one of the many awards made under the department's Suggestion Award Program to employees who have submitted suggestions which are judged to be of intangible benefit to the service concerned.

Mr. Nichols initiated an improved method of adjusting the position of antenna on ITT Guide Path Towers. This, it was estimated, would accrue in savings totalling about \$2,000 per year in the Atlantic Region, with a total of around \$14,000 across Canada.

"His suggestion represents a worthwhile improvement in work methods and he is to be commended for his efforts", said G. A. Scott, Assistant Deputy Minister, Air.

Other awards: J. Beattie, Maint. Bldg. Sup., Victoria, \$40; R. Brown, R. Operator, Abbotsford, B.C., \$75; J. R. Ferguson, Technician, Montague, PEI, \$25; J. Guay, Tech. Officer, Ottawa, \$62.50; D. V. Knight, Fire Fighter, Winnipeg, \$50; C. Patafie, Clerk, Ottawa, \$62.50; L. Schwalm, Technician, Maniwaki, P.Q., \$35; D. Valiquette, Elect. Foreman, Bois de Filion, P.Q., \$50.

**It PAYS to suggest  
ideas for BETTER  
work methods**



Jack Nakamoto

## Art—From bikinis to house designs

Jack Nakamoto, D.O.T. art supervisor, recently won a suggestion award certificate for a series of five cartoon posters, copies of which will be distributed throughout the various government departments. A Canadian-born Japanese, he served overseas with the Royal Canadian Engineers during the Second World War. After the war he studied art, fashion design and writing in Montreal, and made a living out of each field, though somewhat precariously, he admits.

Designing has always been in his blood, and his creative bent has run from designing bikini bathing suits from neckties, writing articles and short stories, to making display and house designs.

Two years ago as a Centennial project, he designed two homes, one his own, which he put out to contract. He designed and built in his home a Japanese bathtub, which, he feels, is adaptable for use in our Canadian way of living.

## Volume publié sur la géologie de la vallée du Saint-Laurent

La Division du chenal maritime du Saint-Laurent, service du ministère fédéral des Transports ayant son siège à Montréal, vient de publier, après de laborieuses recherches s'échelonnant sur une période de sept ans, un volumineux dossier portant sur les formations rocheuses et les dépôts meubles de la vallée du Saint-Laurent, entre Montréal et Baie Saint-Paul, soit une distance de quelque 300 milles.

Ce document d'une haute portée scientifique renferme de précieuses données sur les sondages effectués dans cette vaste étendue du Saint-Laurent depuis le tournant du siècle. Un des plus anciens documents utilisés au cours des études date de l'an 1911. D'autres données de base ont même été puisées de rapports et dossiers vieux de cent ans et plus.

Ce volume, en quelque sorte un résumé de la géologie du fleuve Saint-Laurent, constitue un important instrument de travail pour tous ceux qui s'adonnent à des recherches scientifiques dans cette région mieux connue aujourd'hui sous le nom de basses-terres du Saint-Laurent. Les données qu'il renferme fournissent l'information requise en vue de l'élaboration de nouveaux travaux d'envergure à entreprendre dans le fleuve, particulièrement dans le domaine de l'hydraulique maritime.

Il s'agit, en fait, d'un catalogue d'information qu'on se propose de mettre à jour périodiquement et de compléter éventuellement de façon à ce qu'il renferme des données sur toute l'étendue du chenal maritime du Saint-Laurent jusqu'à l'entrée du lac Ontario. L'étude pourra même porter sur certains autres cours d'eau importants, tel le Saguenay, par exemple.

Initié en 1962 par quelques ingénieurs de la Section des études techniques de la Division du chenal maritime du Saint-Laurent, le projet a pris l'allure d'un rapport considérable, ces dernières années, sous la direction de l'ingénieur Robert Nantel, et grâce à la collaboration de plusieurs techniciens. C'est enfin à l'ingénieur Laurent Simard qu'on a confié la tâche de collationner le matériel et d'en assurer la publication. Le travail de coordination a été assumé par le surintendant de la Section des études techniques, M. John Sylvester, sous la direction générale de l'ingénieur en chef de la Division du chenal maritime, M. William P. O'Malley.

Cette publication devient la première et unique source de renseignements sûrs portant sur les conditions souterraines de la vallée du Saint-Laurent. Pour les étudiants de la géologie, les universités et le monde scientifique en général, c'est une précieuse

acquisition. Le volume mérite certes une place de choix dans nos bibliothèques canadiennes.



**LONG TRAVAIL DE RECHERCHES ACHEVÉ**—Un volumineux dossier portant sur la géologie de la vallée du Saint-Laurent vient d'être complété par les ingénieurs de la Division du chenal maritime du Saint-Laurent, à Montréal. Il s'agit d'un recueil de données sur les formations rocheuses et les dépôts meubles de la vaste région s'étendant entre Montréal et Baie Saint-Paul. Le volume renferme une information détaillée sur le résultat de sondages effectués dans ce secteur depuis environ un siècle. Il s'agit en fait d'un précieux instrument de travail mis à la disposition du monde scientifique. Dans cette photo, on voit, de gauche à droite, trois des principaux artisans du projet, l'ingénieur Laurent Simard, chargé de collationner le matériel et d'en assurer la publication; l'ingénieur en chef de la Division du chenal maritime, M. William P. O'Malley; et le surintendant des études techniques de la même division, M. John Sylvester.

**AFTER LENGTHY PERIOD OF RESEARCH**—A great deal of work was involved in compiling material and arranging for publication of the data on the rock and soil of the St. Lawrence River. Seen reviewing some of their work are, from left: Engineer Laurent Simard, responsible for compiling the material and arranging for its publication; William P. O'Malley, Chief Engineer of the Division, who directed the co-ordination work, and John Sylvester, Superintendent of the Technical Studies Section, who was responsible for co-ordination work. Almost 5,000 bore holes are described in this first edition of data on the St. Lawrence River valley.

### St. Lawrence River soil and rock data

Following research spread over a period of seven years, the St. Lawrence Ship Channel Division, Montreal, has recently published a book on soil and rock formation in the St. Lawrence Valley between Montreal and Baie Saint-Paul, a distance of some 300 miles.

The book, of far-reaching scientific value, contains valuable data on soundings made since the turn of the century in that vast stretch of the St. Lawrence. One of the oldest documents used in the studies dates back to 1911, while other basic data has been drawn from reports and files more than 100 years old.

It is really a summary of the geology of the St. Lawrence River, and it constitutes an important working instrument for those engaged in scientific research in the region, better known today as the St. Lawrence lowlands. The data in it provides information required for the development of new wide-scale projects to be undertaken in the river, particularly in the field of marine hydraulics.

The book, which is a catalogue of information, will be brought up to date periodically and eventually it will contain data on the whole stretch of the St. Lawrence Ship Channel to the entrance to Lake Ontario. The study is designed also to cover other important waterways such as the Saguenay.

Started in 1962 by engineers of the Technical Studies Section of the St. Lawrence Ship Channel Division, the project has developed into a comprehensive report under the direction of Engineer Robert Nantel and with the cooperation of several technicians.

The work of compiling the material and arranging for its publication was entrusted to Engineer Laurent Simard, and coordination work was done by John Sylvester, Superintendent of the Technical Studies Section, under the general direction of William P. O'Malley, Chief Engineer of the Ship Channel Division.

This publication is the one and only source of reliable information on subterranean conditions of the St. Lawrence River.



# Transport

# ALBUM

## des Transports



## CCGS Simon Fraser

The Canadian Coast Guard Ship *Simon Fraser*, named after the fur trader and explorer who is famed for the exploration of the river which bears his name, was built at Burrard Shipyard, Vancouver, B.C. for service on the West Coast. In 1963 she was transferred to the Quebec Marine Agency, Quebec, P.Q.

LENGTH: 204.6 feet

BREADTH: 42 feet

DRAFT: 14 feet

POWER: Diesel Electric, 2,900 SHP

GROSS TONNAGE: 1,353 tons

## Le n.g.c.c. Simon Fraser

Ce brise-glace, nommé d'après celui qui fut le premier à explorer la rivière qui porte son nom en Colombie-Britannique, a été construit à Vancouver en 1960. Après quelques années de service sur la côte du Pacifique, on l'a affecté à l'Agence de la marine de Québec.

LONGUEUR: 204 pieds, 6 pouces

LARGEUR: 42 pieds

TIRANT D'EAU: 14 pieds

PUISSANCE: diesel-électrique, 2,900 cva

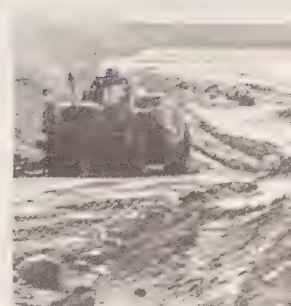
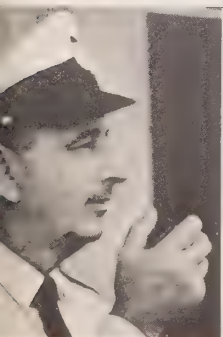
JAUGE BRUTE: 1,353 tonnes

# TRANSPORT



## CANADA

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du ministre.

Rédacteur français Edouard Deslauriers

L'IMPRIMEUR DE LA REINE, OTTAWA, 1969



#### COVER PHOTOGRAPHS

*Top Centre*—President Nixon and Prime Minister Trudeau in jovial mood following the unveiling of the plaque at the Place des Nations in Montreal June 27 to mark the 10th anniversary of the St. Lawrence Seaway. The plaque reads: "The spirit of friendship and co-operation between Canada and the United States is commemorated by this Tablet which was dedicated on the tenth anniversary of the St. Lawrence Seaway by Richard Milhous Nixon, President of the United States of America, and Pierre Elliott Trudeau, Prime Minister of Canada. June 27, 1969."

*Bottom centre*—Pierre Camu, president of the St. Lawrence Seaway Authority, speaks to a crowd of 7,000 people who gathered in sweltering 90 degree heat at the Place des Nations for the celebrations. On the platform from left: Hon. William P. Rogers, U.S. Secretary of State; Mrs. Donald C. Jamieson; President Nixon, Hon. Donald C. Jamieson, federal Minister of Transport; Prime Minister Trudeau; Mrs. Richard Nixon; Hon. Mitchell Sharp, Secretary of State for External Affairs; Mrs. William P. Rogers; Hon. John A. Volpe, U.S. Secretary of Transportation; Mrs. Nelson Rockefeller, Mrs. David Eisenhower.

*Left Column*—Visitor's viewing stand at Lock 3 in the Welland Section of the Seaway; funnel of a vessel at St. Lambert Lock; Lionel Méthot, one of the Lockmasters in Eastern Section of the Seaway; panorama of Toronto, one of the Great Lakes Ports served by the Seaway.

*Right column*—Construction on the 8.6 mile Welland by-pass channel; containerized cargo being unloaded at one of the Great Lakes Ports; linesmen handling a vessel at the Beauharnois Lock; an ocean vessel upbound into the Seaway at St. Lambert Lock.

#### FRONTISPICE

*Au centre, en haut*—Le Président Nixon et le Premier ministre Trudeau sourient après avoir dévoilé, le 27 juin, à la place des Nations, à Montréal, une plaque commémorative du 10<sup>e</sup> anniversaire de la voie maritime du Saint-Laurent. Cette plaque porte l'inscription suivante: «Cette plaque commémore l'amitié et la collaboration entre les États-Unis et le Canada en ce jour du 10<sup>ième</sup> anniversaire de la Voie maritime du Saint-Laurent. Elle fut dévoilée par Richard Milhous Nixon, Président des États-Unis d'Amérique, et Pierre Elliott Trudeau, Premier Ministre du Canada ce 27 juin 1969.»

*Au bas, au centre*—M. Pierre Camu, président de l'Administration de la voie maritime du Saint-Laurent, parle à une foule de 7,000 personnes qui s'est rassemblée par une chaleur étouffante de 90 degrés à la place des Nations pour les célébrations. Sur la plateforme, à partir de la gauche: l'honorable William P. Rogers, secrétaire d'État des États-Unis; Mme Donald C. Jamieson; le Président Nixon; l'honorable Donald C. Jamieson, ministre fédéral des Transports; le Premier ministre Trudeau; Mme Richard Nixon; l'honorable Mitchell Sharp, secrétaire d'État aux Affaires extérieures; Mme William P. Rogers; l'honorable John A. Volpe, secrétaire des Transports aux États-Unis; Mme Nelson Rockefeller, Mme David Eisenhower.

*Colonne de gauche*—Estrade des visiteurs à l'écluse 3 dans la section de Welland de la voie maritime; cheminée d'un navire à l'écluse Saint-Lambert; Lionel Méthot, l'un des maîtres-éclusiers de la section est de la voie maritime; vue panoramique de Toronto, l'un des ports des Grands lacs desservis par la voie maritime.

*Colonne de droite*—Construction sur le chenal de contournement de 8.6 milles de Welland; déchargement d'une cargaison containerisée à un port des Grands lacs; préposés aux amarres aidant au passage d'un navire à l'écluse de Beauharnois; un navire transocéanique remonte la voie maritime à l'écluse Saint-Lambert.

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# From the Transportation Council

## Road and motor vehicle traffic safety.

The responsibilities of the Assistant Deputy Minister, General include Legal Services, Real Estate and Emergency Measures, and from January 1, 1969, the new Road and Motor Vehicle Traffic Safety Office, with Dr. Gordon D. Campbell as Director. This new traffic safety office implements a government decision that the Department of Transport should undertake responsibility for co-ordinating the role of the federal government in this field.

Although the provinces have primary responsibility for road, highway traffic and motor vehicle administration, the federal Government does spend substantial funds on road construction and maintenance; it has one of the largest motor vehicle fleets in Canada; it is involved in driver administration through the Criminal Code, and is concerned with inter-provincial and international trade in motor vehicles.

Extensive discussions among federal departments and with the provinces at the official and ministerial levels made it possible for the department to identify a program which includes:

1. Safety standards for new motor vehicles and components at the point of manufacture or importation into Canada;
2. Co-ordination of all federal activities relating to road and motor vehicle traffic safety;
3. Correlation of road and motor vehicle traffic research in Canada;
4. Planning and support of research programs;
5. International liaison in matters related to road and motor vehicle traffic safety.

As announced by the Minister in the House of Commons on June 17, the Government is giving consideration to legislation to establish mandatory safety standards for new motor vehicles and components, including tires, at the point of manufacture or importation into Canada. Pending Canadian legislation, motor vehicle manufacturers are complying with existing standards and reporting defects.



## La sécurité routière

Depuis le 1er janvier dernier, le sous-ministre adjoint à la direction générale doit, en plus de ses responsabilités concernant les services juridiques, l'immeuble et les mesures d'urgence, s'occuper du nouveau Bureau de la sécurité routière et automobile que dirige M. Gordon D. Campbell. La création de ce bureau est le résultat d'une décision du gouvernement chargeant le ministère des Transports de coordonner l'activité du fédéral dans ce domaine.

Bien que les routes, la circulation et le contrôle des véhicules automobiles relèvent principalement de la compétence provinciale, le gouvernement fédéral affecte des sommes assez considérables à la construction et à l'entretien des routes. De plus, il possède l'un des parcs automobiles les plus importants du Canada. Il participe également à la réglementation relative aux conducteurs d'automobiles par l'intermédiaire du Code criminel, et s'occupe du commerce interprovincial et international des véhicules automobiles.

A la suite de longs entretiens avec les autres ministères et avec les provinces, le ministère des Transports a réussi à établir les grandes lignes d'un programme portant sur:

1. les normes de sécurité que doivent respecter les fabricants ou les importateurs de véhicules neufs et de pièces constitutives;
2. la coordination de l'ensemble de l'activité fédérale dans le domaine de la sécurité routière;
3. la corrélation de toutes les recherches menées dans ce domaine au Canada;
4. la planification et l'appui des programmes de recherche;
5. l'échange de renseignements, à l'échelle internationale, concernant la sécurité routière.

Comme le ministre des Transports l'annonçait aux Communes le 17 juin, le gouvernement envisage l'élaboration de mesures législatives imposant des normes de sécurité pour les véhicules neufs et les pièces constitutives, y compris les pneus, aux points de fabrication ou d'importation au Canada. Dans l'attente de ces mesures, les fabricants de véhicules automobiles doivent respecter les normes actuelles et déclarer toute défectuosité.

Sous-ministre adjoint à la direction générale  
GILLES SICOTTE.  
*Assistant Deputy Minister, General*



# Minister attends graduation ceremony at Coast Guard College

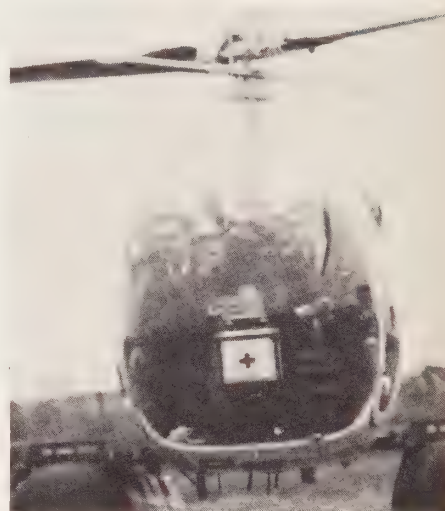
Transport Minister Don Jamieson landed by helicopter on the front lawn of the Canadian Coast Guard College, Sydney, to preside at the college's first graduation ceremonies May 31.

Relatives and guests crowded the college drill hall for the colourful ceremony in which the Minister, the Assist Deputy Minister, Marine, Gordon Stead, and the Director, Marine Operations, A. H. G. Storrs, took part in the presentation of awards.

The 18 graduate officer cadets, from every region in Canada, had enrolled at the college four years ago when it was founded by the federal Department of Transport to provide qualified marine officers for the increasingly complex Canadian Coast Guard fleet. The graduates began their operational careers following the ceremony, leaving the following week for various postings in the Canadian Coast Guard fleet.

The Minister congratulated the graduation class on its high standard of performance and complimented the staff of the College in the success of this new venture.

The graduating class consisted of 11 navigation officers and seven marine engineers. Graduates from British Columbia were navigation officers Philip Arthur Irons of Abbotsford, Henry Roger Southin of Ladysmith, and a marine engineer, Brian Thomas Baillie of New Westminster; from Alberta, navigation officer Richard Chapman Theedom of Red Deer; from Saskatchewan, navigation officer Frederick William Guse of Regina and marine engineer Frederick James Andrews of Nipawin; from Manitoba, marine engineer Russell Buick of Camp Shilo; from Ontario, navigation officers James George Calvesbert of Brantford, Barrie William Robertson of Toronto, and marine engineer Charles Clark Norris of Cooksville; from Quebec, navigation officers Alexis Fernandes of Montreal, David George Parkes and James Jean-Paul Drolet of Quebec City, J. Alain Canuel of Ste-Foy, and Jean-Lionel Maillette of Trois-Rivieres; from Nova Scotia, navigation officers Paul Gregor Kavanagh of Glace Bay, Donald Kemp Ross of St. Peters, Cape Breton, and marine engineer Roy Lewis Bambury of Halifax.



ARRIVAL AT COLLEGE—Transport Minister Don Jamieson arrives by helicopter for graduation ceremony.

ARRIVÉE AU COLLÈGE—Le ministre des Transports, M. Don Jamieson, arrive par hélicoptère pour la cérémonie de collation des grades.



FAREWELL—Cadet Officer Kemp Ross gives valedictory address at graduation ceremony.

LES ADIEUX—En fin de cérémonie, l'élève-officier Kemp Ross prononce le discours d'adieu.



TOPS IN SEAMANSHIP—Cadet Officer M. D. Rintoul, left, receives the Mark Purney Memorial Trophy from Cadet Captain Robertson, in the first year awards.

LES MEILLEURS MARINS RÉCOMPENSÉS—L'élève-officier M. D. Rintoul, à gauche, reçoit le trophée commémoratif Mark Purney du capitaine Robertson comme récompense de première année.

## Le ministre assiste à la collation des grades

Le ministre des Transports, l'honorable Don Jamieson, atterrit en hélicoptère sur la pelouse du Collège de la Garde côtière canadienne, à Sydney, où il a présidé aux premières cérémonies de collation des grades de cette école, le 31 mai.

De nombreux parents et invités ont rempli la salle d'exercice du Collège pour assister à la cérémonie pittoresque au cours de laquelle le ministre, le sous-ministre adjoint à la marine, M. Gordon Stead, et M. A. H. G. Storrs, directeur des opérations de la marine, ont participé à la remise des diplômes.

Les 18 diplômés ont commencé leur carrière presque immédiatement en assumant dès le début de la semaine divers postes dans la flotte de la Garde côtière canadienne.

# Better ferry service for P.E.I. visitors

The crowds of tourists visiting Prince Edward Island this summer were greeted with a new experience when they reached the mainland ferry terminal at Cape Tormentine, N.B. Instead of having to wait in line along the highway to board the three ferries of last year, they found themselves passing quickly through a toll gate into a 400-vehicle parking area.

Instead of having to line up aboard the ferry to get their tickets, they got them from the toll gate as they entered. And if they had to wait any length of time for their crossing, they were able to use the restaurant facilities, washrooms, take-out counters and tourist information services in a new terminal building.

There are now four Department of Transport vessels operated by Canadian National on the nine-mile run between Cape Tormentine and Borden, P.E.I., and they are offering a more frequent service than ever before with 46 crossings a day.

The new service to Prince Edward Island was officially inaugurated June 14 when the latest ship to join the ferry fleet was rechristened the *m.v. Lucy Maud Montgomery* in ceremonies at Borden, P.E.I.

This vessel was purchased in Europe to expand the capacity of the service in time for the summer rush, and was renamed in honor of Prince Edward Island's most famous writer, the author of "Anne of Green Gables." The new arrival plus the three already in operation—the *Abegweit*, the *Confederation* and the *John Hamilton Gray*—are expected to move close to a million passengers to and from Prince Edward Island this year.

Speaking at the Borden ceremonies, Transport Minister Don Jamieson recalled that one of the terms on which Prince Edward Island entered Confederation in 1873 was that the Federal government would provide an efficient and continuous link with the mainland.

Honouring this promise has been a challenge to successive governments. Initially, the major problem was maintaining the link in the face of the severe ice conditions experienced in the Northumberland Strait every winter and early spring. In 1903, for example, one steamer in the service was trapped in ice for 66 days! However, the arrival of the ice-breaking rail-car ferry *Prince Edward Island* in 1916 marked the

beginning of a reliable year-round service to the province.

The most recent challenge has been keeping up with the rapidly-growing traffic as Prince Edward Island grows in popularity as a tourist attraction. In 1958, the CN-operated ferries carried 379,103 passengers and 142,139 vehicles between Borden and Cape Tormentine. By last year the total had grown to 825,703 passengers and 332,726 vehicles.

The rechristening of the latest ship took place in brilliant sunshine as bands played and flags fluttered in the breeze. Gracie Finley, the young Charlottetown actress who plays the part of Anne in the musical version of "Anne of Green Gables" was the ship's sponsor.

The 262-foot long *Lucy Maud Montgomery*, which has capacity for 100 vehicles and such up-to-date devices as closed circuit TV to assist her master in docking, is not likely to remain the latest addition to the service for long.

## Service amélioré pour l'Île du Prince-Edouard

Les touristes qui ont visité l'Île du Prince-Edouard cet été ont connu une nouvelle expérience lorsqu'ils se sont rendus au terminus du service de transbordement de Cap Tormentine (N.-B.). Au lieu de se ranger en file d'attente le long de la route avant de monter à bord de l'un des trois transbordeurs de l'an dernier, ils ont passé rapidement la barrière pour pénétrer dans une aire de stationnement pour 400 véhicules.

Au lieu de s'aligner à bord du transbordeur pour obtenir des billets, ils les ont obtenus à la barrière à mesure qu'ils entraient. Et si ces touristes ont dû attendre quelque temps avant de traverser, ils ont trouvé, à l'intérieur de la nouvelle gare maritime, un restaurant, des toilettes, des comptoirs de commandes à emporter et des services d'information touristique.

Le National-Canadien exploite quatre navires du ministère des Transports pour parcourir le trajet de neuf milles entre Cap Tormentine et Borden (I.P.-E.). Ces navires assurent un service plus fréquent que jamais en effectuant 46 traversées par jour.

Ce service de traversée à l'Île du Prince-Edouard a été inauguré officiellement le 14 juin lorsque le dernier navire à se joindre

à la flotte de transbordement a été rebaptisé *Lucy Maud Montgomery*, au cours d'une cérémonie à Borden (I.P.-E.).

Ce navire, acheté en Europe pour améliorer le service durant les mois d'été, a été rebaptisé en l'honneur du plus célèbre écrivain de l'Île du Prince-Edouard, l'auteur du roman «Anne of Green Gables». Le «*Lucy Maud Montgomery*» et les trois autres déjà en service, l'*Abegweit*, le *Confederation* et le *John Hamilton Gray*, devaient transporter, cette année, près d'un million de passagers à destination et en provenance de l'Île du Prince-Edouard.

Prenant la parole lors de la cérémonie de Borden, le ministre des Transports, l'honorable Don Jamieson, a rappelé qu'en vertu d'une des conditions de l'entrée dans la Confédération de l'Île du Prince-Edouard, en 1873, le gouvernement fédéral devait assurer un lien efficace et continu avec la terre ferme.

Le respect de cette promesse a constitué un défi aux gouvernements qui se sont succédé depuis cette époque. Au début, le problème majeur était de maintenir ce lien malgré les conditions critiques d'englacement du détroit de Northumberland qui se

produisaient chaque hiver jusqu'au début du printemps. En 1903, par exemple, un vapeur en service fut emprisonné dans les glaces pendant 66 jours! Toutefois, l'entrée en service, en 1916, du transbordeur train-auto et brise-glaces Prince Edward Island marqua le début d'un service fiable toute l'année pour la province.

Le défi le plus récent a été celui de faire face au trafic qui augmente rapidement à mesure qu'augmente la popularité de l'Île du Prince-Edouard comme centre touristique. En 1958, les transbordeurs exploités par le National-Canadien ont transporté 379,103 passagers et 142,139 véhicules entre Borden et Cap Tormentine. L'année dernière, le total a passé à 825,703 passagers et 332,726 véhicules.

La cérémonie au cours de laquelle un nouveau nom a été donné au navire le plus récent s'est déroulée sous un soleil éclatant, aux sons de la fanfare, alors que les drapeaux flottaient au vent. Mlle Gracie Finley, la jeune actrice de Charlottetown qui joue le rôle d'Anne dans la version musicale de «Anne of Green Gables», était la marraine du navire.



# Inauguration of new ferry service



**LATEST ARRIVAL**—The Lucy Maud Montgomery, renamed to honour the famous Prince Edward Island author, was built in France in 1965 and operated between Sweden and Denmark until purchased earlier this year for the Northumberland Strait ferry service.

**DERNIER ARRIVANT**—Le Lucy Maud Montgomery, ainsi nommé en l'honneur de l'auteur fameux originaire de l'Île du Prince-Edouard, a été construit en France en 1965 et a navigué entre la Suède et le Danemark avant d'être acheté, au début de cette année, pour le service de transbordeur du détroit de Northumberland.



**MIND THE SPLASH!**—The Lucy Maud Montgomery was christened by Miss Gracie Finley, the Charlottetown actress who plays the part of Anne in the musical version of "Anne of Green Gables". Here Miss Finley, in stage costume, releases the bottle, while Walter B. Mitchell, manager of CN's maritime area, ducks in preparation for the splash.

**GARE AUX ÉCLABOUSSURES!**—Le Lucy Maud Montgomery a été baptisé par Mlle Gracie Finley, l'actrice de Charlottetown qui joue le rôle d'Anne dans la version musicale d'« Anne of Green Gables ». Mlle Finley, que l'on voit ici en costume de scène, libère la bouteille tandis que M. Walter B. Mitchell, directeur de la région maritime du CN, s'apprête à éviter les éclaboussures.



**TERMINALS OPENED**—Premier Alex B. Campbell of P.E.I. and Finance Minister L. G. DesBrisay of New Brunswick cut through the banner at the entrance to the Cape Tormentine terminal area.

**INAUGURATION DU TERMINUS**—Le premier ministre de l'Île du Prince-Edouard, l'honorable Alex B. Campbell, et le ministre des Finances du Nouveau-Brunswick, l'honorable L. G. DesBrisay, coupent le ruban placé à l'entrée du terminus de Cap Tormentine.

# P.E.I. and New Brunswick ceremonies

**CAPTAIN OF VESSEL**—Capt. Gideon Kean is master of the latest vessel to join the Northumberland Strait ferry fleet, operated by CN for the federal Department of Transport.

**CAPITAINE DE NAVIRE**—Le capitaine Gideon Kean commande le dernier navire à se joindre à la flotte de transbordeurs du détroit de Northumberland. Le service est exploité par le National-Canadien pour le compte du ministère fédéral des Transports.



**PRINCIPAL SPEAKER**—Transport Minister Don Jamieson was the principal speaker at the christening of the Lucy Maud Montgomery at Borden, P.E.I., June 14.

**ORATEUR PRINCIPAL**—Le ministre des Transports, l'honorable Don Jamieson, était l'orateur principal au baptême du Lucy Maud Montgomery qui a eu lieu le 14 juin à Borden (I.P.-E.).



**PLAQUE UNVEILED**—A plaque honouring the author was unveiled aboard the new ferry by Miss Kate Macdonald of Toronto, granddaughter of Lucy Maud Montgomery. At the ceremony are, from left: Premier Alex B. Campbell of P.E.I.; Dr. E. Stuart Macdonald of Toronto, son of Lucy Maud Montgomery, Miss Macdonald and Walter B. Mitchell, manager of CN's maritime area. (Canadian National photos)

**NAUGURATION D'UNE PLAQUE COMMEMORATIVE**—Une plaque commémorant l'auteur a été dévoilée à bord du nouveau transbordeur par la petite-fille de Lucy Maud Montgomery, Mlle Kate Macdonald, de Toronto. Étaient présents à la cérémonie, de gauche à droite, le premier ministre de l'Île du Prince-Édouard, l'honorable Alex B. Campbell, le Dr E. Macdonald, de Toronto, fils de Lucy Maud Montgomery, Mlle Macdonald et M. Walter B. Mitchell, directeur de la région maritime du National-Canadien.

(Photos du National-Canadien)





# Un nouveau système de contrôle améliore les services de pilotage

Les services de pilotage pour la voie navigable du Saint-Laurent sont maintenant dotés de tableaux de contrôle semblables à ceux qui sont utilisés pour le contrôle de la circulation aérienne. Il en résulte une amélioration sensible du service tout le long du Saint-Laurent, y compris le chenal maritime, la voie maritime, le lac Ontario et le canal de Welland.

L'an dernier, les quelque 370 pilotes attachés au service ont effectué 47.809 sorties pour répondre aux besoins de la navigation.

C'est en 1967 qu'on a commencé à modifier le vieux système qui consistait alors à noter dans un journal ou registre les allées et venues des navires, le déplacement du personnel et enfin tous les autres détails se rapportant au travail du pilote au cours de chacune de ses sorties.

A cette époque, on a adopté un système de fiches qui a permis d'accélérer les procédures et de réduire les erreurs d'environ 60 pour cent. Ce n'était tout de même pas encore un système idéal.

En novembre dernier, on a enfin installé des tableaux de contrôle au centre du pilotage de Montréal. L'expérience s'étant révélée fructueuse, des installations semblables ont été faites au centre de Québec le printemps dernier.

Les bureaux de Québec, Montréal, Cornwall et Port Weller, près de St. Catharines (Ont.), sont constamment en communication avec les pilotes. Selon le capitaine Guy Lahaye, surintendant régional des pilotes, à Montréal, les pilotes à l'intérieur de chaque région doivent se déplacer par train ou autobus pour se porter à la rencontre des navires.

Le centre de Montréal, dont une succursale se trouve à Trois-Rivières, est chargé de dépêcher les 190 pilotes desservant la région s'étendant entre Trois-Rivières et Cornwall. Il faut donner 12 heures d'avis pour retenir les services des pilotes.

Bien que les pilotes de la région de Montréal ne soient pas des fonctionnaires de l'État, le ministère des Transports fait la perception des droits de pilotage et les



IT'S RIGHT HERE!—Réal Paré, financial officer, checks an account with Mrs. Denise Brunet.

VOILÀ... J'AI TROUVÉ!—L'agent financier Réal Paré discute un problème de comptabilité avec Mme Denise Brunet.

porte au registre de façon à en assurer le partage. Dans d'autres régions, les pilotes sont des employés du ministère des Transports.

Le capitaine A. D. Latter, surintendant des opérations de pilotage, estime que le nouveau système présentement en vigueur a permis d'écarter à peu près toutes les erreurs. Il permet, par ailleurs, de desservir un plus grand nombre de navires beaucoup plus rapidement qu'auparavant.



KEEPING RECORDS STRAIGHT—Here Pilot Despatcher Jerry Chauvin checks pilots' records.

AU TABLEAU DE CONTRÔLE—Le préposé Jerry Chauvin vérifie les données qu'il doit transposer au tableau de contrôle.

## New control system boosts pilot services

Control panels similar to those used in air traffic control are an important part of the pilotage division's new, highly efficient pilot control system for the St. Lawrence waterway. This includes the ship channel, the Seaway, Lake Ontario and the Welland Canal.

Shipping last year in this busy waterway required in excess of 47,809 pilot assignments, and these were filled by a staff of some 370 pilots.

Renovation of the division's severely-strained system of multiple journal entries began in 1967. A card system provided increased speed and efficiency, cutting down errors by some 60 per cent. However, it was not an ideal system.

A new panel system was installed at the Montreal Despatch Centre last November and, following its success, a similar instal-

lation was made in Quebec City in the spring.

Offices at Quebec, Montreal, Cornwall and Port Weller, near St. Catharines, Ont., keep in touch with pilots at all times. Captain Guy Lahaye, Regional Superintendent of Pilots, Montreal explains that pilots within each region are transferred back and forth by train or bus when they are required by ships travelling in either direction.

The Montreal despatch centre, which has a sub-station at Trois Rivières, has the responsibility of despatching the 190 pilots and apprentices operating between Trois Rivières and Cornwall.

Requests for pilots must be received 12 hours in advance.

Although the pilots operating in the Montreal region are not public servants, the Department of Transport collects their fees and keeps the records on which the pilots base their fee-sharing. Net costs to the department for these services amount to about \$464,000 annually. Pilots in some other regions are salaried employees of D.O.T.

# Lightkeepers for 134 years

One of the most colourful and unique stories in the long history of Newfoundland is that of the Cantwell family, who for five generations have been lightkeepers at Cape Spear, the most easterly point in North America.

In 1835, when Prince Henry of the Netherlands was on his way to visit the Port of St. John's, his ship got into difficulties in a fog and James Cantwell, great great grandfather of Frank Cantwell, who retired as lightkeeper on April 19, located the ship and guided it safely to St. John's Harbour. At that time James Cantwell was the St. John's Harbour Pilot.

In recognition of this service, the Prince presented James with a parchment commending his feat of seamanship, and as a further gesture of appreciation asked James if he would accept some favour. To this James replied that he very much wished to become Lighthouse Keeper at Cape Spear. The request was subsequently granted and the family has held that position since the station opened 134 years ago.

The present incumbent, Gerald Cantwell, son of Frank Cantwell, represents the sixth generation of the Cantwell family to hold the position of Lightkeeper.

## 25 years of service

Martin Hefferman, assistant Lightkeeper at Cape Spear, recently completed 25 years of service and was presented his gold pin by P. M. Bailey, Superintendent of Lights.

## Life on a lighthouse

On this page we have three stories from lighthouses—two in Canada and one in Australia. The history of Canada's lighthouses is filled with tales of adventure, perils of the sea, war and even ghost stories. Why can't we have more items of interest from them?

You folks who live on these lighthouses must have plenty of stories to tell—why don't you let readers of "Transport" hear some of them?

### Want a penfriend?

Beverley Hills, aged 14, of Cape Leveque Lighthouse in Western Australia, wants a penfriend who lives on a Canadian lighthouse station. The request was received from Beverley in a letter to "Transport".

If there is a girl, or boy, who would like to become Beverley's penfriend they should write to the Editor of "Transport", Department of Transport, Ottawa, and a letter of introduction from Beverley will be forwarded to them.

**FROM FATHER TO SON**— In the picture Frank Cantwell passes over the keys to his son, Gerry, who is now Principal Lightkeeper. From Left: R.E. Stone, District Marine Agent; Frank Cantwell; his son Gerry, and P.M. Bailey, Superintendent of Lights.

**HER DISABLED FRIEND**—Miss Sarah Flemming, daughter of the senior lightkeeper at Chebucto Head Lightstation, Nova Scotia, feeds a wild fox which first visited the station in search of food early last winter. It will be seen that the fox's left front paw is missing at the joint and this apparently accounted for it searching for food at the house. The fox is now sufficiently tame that it eats out of Sarah's hand and does not seem to mind posing for a photograph.

**FIN RENARD APPRIVOISÉ . . .** C'est au début de l'hiver dernier que ce renard, en quête de nourriture, a été aperçu, la première fois, rôdant autour du phare de Chebucto Head aux approches du port de Halifax. On peut voir dans la photo que le renard a une partie de la patte gauche amputée. C'est sans doute pour cette raison qu'il a quitté son habitat naturel pour chercher refuge auprès des occupants du phare, la famille Flemming. On voit ici le renard en train de prendre sa nourriture des mains de Mlle Sarah Flemming, fille du gardien de phare.





# Keeping clear the laneways of the sky



## Aviation Task as big as Canada itself

by Ken M. Parks  
*Information Services Division*

For the guidance of air traffic across the trackless skies, the Canada Department of Transport has responsibility for the regulatory aspects of aviation in Canada and for the provision and maintenance of the wondrous array of electronic gadgetry that is required for this task.

It is a task that is as big as Canada itself. To keep abreast of their countless responsibilities from Sandspit, B.C. to St. John's, Newfoundland, from Toronto to Tuktoyaktuk, planners, inspectors, engineers and technicians of the department's Air Services Civil Aviation Branch must take to the air themselves.

To meet this need, the department has its own air fleet of 42 fixed wing aircraft and 26 helicopters, under the general control of the Flight Services Division, which has its headquarters at Ottawa International Airport.

In operation, the aircraft are attached to the department's six Air Services and four Marine Services regions, the helicopters being assigned almost entirely to marine duties.

The department's fastest aircraft are two Lockheed JetStars, used for executive transport, for crew training and for setting control procedures for high altitude air traffic. The two Viscounts are also used for executive transport. They carry the Prime Minister of Canada, members of the Cabinet, foreign heads of state and top ranking officials of various Government departments on official journeys.

The Department of Transport air fleet also includes seven turbo-powered Beechcraft King Airs; eight Queen Airs with piston engines; a Cessna Super-Skymaster,

six Beechcraft D55 Barons; one Beechcraft 56 turbo-powered Baron; five De Havilland DHC-2 Beavers and nine Douglas DC3's. Among the rotarywing aircraft are 16 Bell 47's, six Bell Jet Rangers, one Sikorsky S61-N and three Alouettes.

### Birth of the Fleet

The departmental fleet had its beginnings in 1936, when the department came into existence and took over control of civil aviation from the Department of National Defence. At that time there were only eight departmental aircraft of assorted types. The change since then is directly proportionate to the growth of responsibilities that accompanied the tremendous development of aviation in Canada.

Today's controlled airways and ultra-modern airports, the newest electronic navigation aids, communications and air traffic control systems are a far cry from the era when the aviator's principal directional guide was the nearest railway track.

Six King Airs and five of the DC3 aircraft are used on a full-time basis for checking the accuracy and performance of the various air navigation aids. For this purpose they are flown by inspectors from the Civil Aviation Branch, all of whom are experienced pilots and most with airline transport ratings. On board to operate the intricate electronic equipment with which these airplanes are fitted are technicians and engineers from the department's Telecommunications and Electronics Branch.

Beechcraft Queen Airs are used in the course of their duties by departmental aviation inspectors, engineer test pilots and aviation research officers, all of whom are aviators with highest qualifications. The Queen Airs are useful for a limited amount of calibration work such as the checking of low frequency ranges, instrument landing systems and other air safety installations. The twin-engined Cessna Super-Sky-master is used principally for aerial ice reconnaissance and oil pollution patrol over the Gulf of St. Lawrence and along the St. Lawrence River and Great Lakes system.

The Beechcraft Barons are used for transportation by departmental inspectors in their endless rounds of departmental and private airports, flying schools and clubs and other aviation establishments that have personnel, aircraft or equipment requiring official inspection. Beavers are equipped for amphibious operations during most of the year and are able to take inspectors to remote seaplane bases and other points of call that can be reached only by float planes. They are particularly useful in the investigation of air accidents in hard-to-reach areas.

### With Coast Guard Fleet

The helicopters for the most part, are based at the departmental marine bases or aboard Canadian Coast Guard ships. They fly ice reconnaissance patrols from the flight decks of icebreakers in the Eastern and Western Arctic in summer and in the Gulf of St. Lawrence and St. Lawrence River in winter. They also are used to transport personnel and light cargo loads between the marine bases or their "home" ships and lighthouses, thus greatly speeding supply and staff transfers at many hard-to-approach coastal and island sites. To facilitate this work, the department designed and built special helicopter landing pads at many of these locations, and as a result much of the isolation facing lightkeepers and their families was eliminated.

The helicopters for a long time have been proving their worth in Arctic operations. In earlier times, an icebreaker or Arctic supply ship might lie offshore at a port of call for several days, waiting for a shift in wind and weather before it could move shore ice away and permit access to the shore settlement by supply barges from the vessel. Nowadays, the ship can steam past such a calling place without stopping. Her heli-



D.O.T. helicopter repair shop

copters can quickly swing shoreward, leave consignments of supplies, pick up or drop personnel and get back to the ship while it is still within sight of the settlement.

Helicopters also serve as the "eyes" of convoys. A few years ago, the captain of an icebreaker could choose his path through shifting "leads" in the ice on the basis of such information as could be gained from masthead lookouts. The modern skipper sends an experienced officer aloft in the helicopter to scout for 15 or 20 miles ahead, seeking the easiest route from one ice-free area to the next. As a result, the convoys can keep on the move with a minimum of lost time and this is an important saving in fuel.

### Northern Operations

During the northern operations, helicopters are often used to bring Eskimos from shore settlements to the Arctic patrol vessel CCGS C. D. Howe, aboard which they are given medical and welfare check-ups by officials of the various government departments responsible for the well-being of the native population.

On the West Coast, a twin turbo-powered S-61N Sikorsky helicopter, with a capacity

of 26 passengers and a range of 500 miles, is attached to the departmental marine base at Prince Rupert. This aircraft is used for search and rescue work, as are all the helicopters when the need arises. They are used also for ferrying goods and men to and from lighthouses as remote as Langara, Canada's westernmost point of land on the Queen Charlotte islands.

Apart from helicopters that are assigned to Canadian Coast Guard ships at the departmental marine bases, there are 10 that are specifically attached to the bases for such duties as carrying technicians and equipment needed for the maintenance and repair of lighthouses and other aids to navigation. These aircraft are stationed at Prince Rupert, Victoria, (two); Parry Sound, Ont.; Quebec, Sorel, Saint, John, Charlottetown, Dartmouth, and St John's Newfoundland.

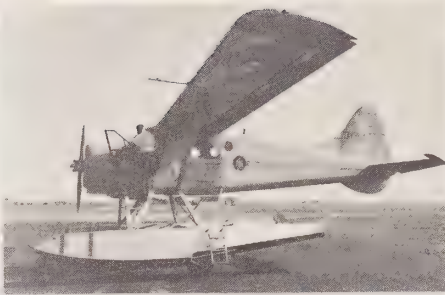
In addition to attending to its own needs, the Department of Transport provides helicopters and crews in support of the work of the Department of Energy, Mines and Resources. These units are stationed aboard the hydrographic survey ship *Baffin*.

In the course of a year, the aircraft of the Department of Transport log nearly 27,000 flying hours.





Cessna Super-Skymaster



De Havilland DHC-2 Beaver



Twin-engine Queen Air

### Maintenance big task

Normal running maintenance and occasional engine changes are carried out at the departmental regional Air Services bases at Moncton, Montreal, Toronto, Winnipeg, Edmonton and Vancouver. Staffs at such points are comprised of a foreman aircraft engineer and several fully licensed aircraft engineers. However, major airframe overhauls and engine changes are done at the department's well-equipped air base and hangar at Ottawa International Airport. This building is a unique landmark in the Ottawa area because of its "inside-out" roof structure. Its vast interior work area, capable of housing a whole fleet of aircraft at a time, was made possible by use of a design that eliminated supporting pillars in the working area. The trusses supporting the roof stand high above the roof itself, providing an unusual and somewhat unfinished appearance.

The department's aircraft maintenance engineers and technicians, and staff members of the well equipped aircraft radio and electronics shop maintain a high standard of proficiency through attendance at various courses and training schools conducted by the major airlines and aircraft manufacturers, and through the department's own training facilities. These courses cover all phases of work on fixed wing and rotary wing aircraft.

The establishment at the Flight Operations base at Ottawa totals 232, including 21 executive pilots and 21 helicopter pilots.

### Special Aviation Services

The Department of Transport hangar at Ottawa International Airport houses all headquarters Flight Operations equipment and facilities, stores, aircraft and radio workshop. There are a helicopter overhaul shop, classrooms and the administrative staff necessary to the operation of the air fleet. Apart from these special aviation services, the department has

a flight simulator, a training device used by its flying personnel to further their instrument flight efficiency and maintain their qualifications at peak levels.

Because the department must keep abreast of every new development in aviation, the task of evaluating new flying pro-

cedures, aircraft and equipment types is an endless one. With a fleet of excellent aircraft and the skilled professional and technical staff available, the Department of Transport is performing that task with a view to fully supporting Canada's aviation industry.



**MANY (PRETTY) HANDS MAKE LIGHT WORK**—Transport Minister Don Jamieson found that the burdens of state business were not really too hard to bear when he officiated on July 24 at the opening of the New Montreal International Airport exhibit and information centre in the Dupont Auditorium at "Man and His World". After addressing the large gathering at the outdoor ceremony, Mr. Jamieson was "pilot" for the take-off of the new project. He is seen here with a bevy of beauties assisting him in operating an airliner "throttle" that activated a simulated jet flight departure.

**IL Y A DES MOMENTS AGRÉABLES**—Les affaires de l'État ne sont tout de même pas accaparantes au point où un ministre n'arrive pas à trouver un petit moment pour se divertir un peu. L'honorable Don Jamieson, ministre des Transports, en fait la preuve ici alors qu'il sollicite l'aide de ces jolies hôtesse de l'Air pour inaugurer officiellement, à «Terre des hommes», l'exposition sur le futur aéroport international de Montréal. Le ministre s'est fait pilote pour l'occasion en activant une manette de contrôle qui a déclenché le mécanisme faisant entendre les bruits d'un moteur d'aéronef au décollage. La cérémonie avait lieu, en juillet dernier, à l'auditorium DuPont de «Terre des hommes».

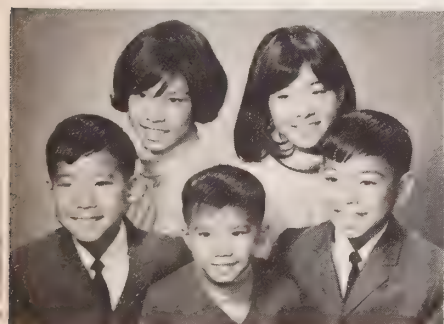
## Who's next for the Piano?

John Chong, a radio operator at Prince George Airport, B.C., doesn't lack music in his home—he has five children, all accomplished pianists.

The Chong children have won many awards when they competed in B.C. competition finals. Last November they organized a family concert in Vanier Hall, Prince George, and played to a near capacity audience.

Besides being keenly interested in music, the Chong children have a high scholastic standing and have won many awards and trophies. They are active in school clubs and sports.

Louise Chong, aged 17, works part time and plans to go this term to UBC to study medicine. She was runner-up in the Winter Carnival competition for Queen Aurora. Louise and Denise, 15, are also accomplished seamstresses and make most of their own clothes.



**MUSICAL CHONGS**—Here are the members of the Chong family of Prince George, all accomplished pianists. From left, Chris, 11; Denise, 15; Wayne, 7; Louise, 17 and Greg, 13.

**TOUS DES MUSICIENS**—Il ne manque certes pas d'entrain ni de joie de vivre dans la famille de l'opérateur radio John Chong, de Prince George (C.-B.). Ses cinq enfants sont des pianistes accomplis qui ont déjà remporté de nombreux prix dans divers festivals de musique. À l'avant, on voit, de gauche à droite, Chris, 11 ans, Wayne, 7 ans, et Greg, 13 ans. Les deux autres, à l'arrière, sont Denise, 15 ans, et Louise, 17 ans.



**AÉROGARE INAUGURÉE**—L'honorable Jean Chrétien (à droite), ministre des Affaires indiennes et du Nord canadien, a présidé les cérémonies d'ouverture de la nouvelle aérogare de Val d'Or, le 16 mai dernier. Une foule nombreuse a répondu à l'invitation du ministre des Transports, l'honorable Don Jamieson, sollicitant la présence de dignitaires locaux aux cérémonies. Cette photo a été prise au moment où l'entrepreneur en construction, M. Ange-Albert St-Amant, présentait une plaque commémorative au ministre Chrétien. La plaque, conservée à l'aérogare comme souvenir de l'événement, porte une clé symbolique en or (réplique de la clé qui a servi à l'inauguration de l'immeuble) ainsi qu'une inscription appropriée notant l'événement.

**OPENING OF AIR TERMINAL**—The Hon. Jean Chrétien, Minister of Indian Affairs and Northern Development, opened the new air terminal at Val d'Or at a ceremony on May 16. Civic authorities and representatives of service clubs and other organizations interested in development of commercial and civil aviation in this highly industrialized mining centre of northwestern Quebec attended the ceremony. Here Mr. Chrétien (right) receives a plaque to commemorate the occasion from the building contractor, Mr. Ange-Albert St-Amant. The plaque bears the symbolic key and appropriate inscription.

### Search for new department symbol

Last year when the Department of Transport promoted a symbol contest, a large number of employees showed a genuine interest in the department by entering the contest and submitting a wide variety of designs. Many of the entries received displayed imagination and originality, but unfortunately, none were quite what was sought for a departmental symbol.

In view of this, it was decided that there would be no winning design and that all entries would be returned to the originators to be retained as their property.

It was the opinion of the Contest Committee that the entry from John S. O'Neill of Willowdale, Ontario, was the best of those received. In appreciation of his efforts it was decided to grant Mr. O'Neill, who is with the Instrument Division of the Meteorological Branch in Toronto, an honorarium of \$50.

### Aucun symbole jugé acceptable

Le concours organisé au ministère l'an dernier en vue de trouver un symbole qui illustrerait les buts et initiatives poursuivis par le ministère des Transports a certes suscité beaucoup d'intérêt chez tous les employés. Dans les nombreux projets soumis, on a pu déceler chez le personnel beaucoup d'imagination et d'originalité.

Malheureusement, aucun des dessins présentés ne répondait aux conditions que doit réunir l'emblème d'un ministère. Aucun des dessins n'a donc été choisi et l'on a décidé de les retourner aux participants.

Le jury a cependant jugé que le projet de M. John S. O'Neill, de Willowdale, Ontario, était le mieux conçu. M. O'Neill est employé à la Division des instruments de la Direction de la météorologie. Pour le récompenser de ses efforts, on lui a décerné un montant de \$50.



## À Sainte-Scholastique

# Renseignements

### «à la source»



**À L'ÉCOUTE DU PREMIER MINISTRE**—Une partie de la foule imposante qui a écouté le discours du Premier ministre, le très honorable Pierre Elliott Trudeau, lors de l'inauguration du centre de renseignements à Sainte-Scholastique

**FROM THE PM**—Section of the large crowd which heard Prime Minister Trudeau speak at the opening of the new Information Centre at Ste. Scholastique.

Le premier ministre Pierre Elliott Trudeau a inauguré, le 14 juin dernier, un centre de renseignements et d'exposition sur les lieux de l'aéroport international qui doit être aménagé à Sainte-Scholastique, au Québec.

Le centre de renseignements, sous l'égide du ministère des Transports, fournit d'abord une information de caractère général sur le futur aéroport. Il sert particulièrement à renseigner les citoyens de la région sur les problèmes de l'expropriation ainsi que sur les programmes de construction, et il apporte enfin son appui à la population dans les domaines du rétablissement et de la formation professionnelle.

La section du centre consacrée à l'exposition illustre les raisons pour lesquelles le pays a besoin d'un nouvel aéroport international, pourquoi Sainte-Scholastique a été choisi comme emplacement et fait voir ce que sera le futur aéroport.



**SOURIRES PARTOUT**—Après la cérémonie de la coupe du ruban, le Premier ministre Trudeau s'est entretenu avec M. Yves Pratte, administrateur principal et président du conseil d'Air Canada (au centre) et M. O. G. Stoner, sous-ministre des Transports.

**SMILES EVERYWHERE**—Prime Minister Trudeau chats with Air Canada's Chief Executive Officer and Chairman of the Board, Yves Pratt (centre) and Department of Transport Deputy Minister O. G. Stoner following the ribbon cutting ceremony.



# Why's, when's and how's at site of new airport

An information and exhibition centre at the site of the new international airport to be built at Ste. Scholastique, Quebec, was opened by Prime Minister Pierre Elliott Trudeau on June 14.

The information centre is being operated by the Department of Transport to supply general information on the future airport and to provide specific information and counselling to local residents on such subjects as expropriation, construction schedules and assistance in the fields of re-establishment and vocational training.

The exhibition portion of the centre provides information on why Canada needs a new international airport, why Ste. Scholastique was chosen for the site, and what the new airport will be like.



**AIDE SYMPATHIQUE**—*Les hôtesse de l'air Lucie Robichaud (à gauche) et Lise Lalonde aident le Premier ministre à couper le ruban, lors de l'inauguration du centre de renseignements.*

**ATTRACTIVE HELP**—*Air Canada Stewardesses Lucie Robichaud, left, and Lise Lalonde help the Prime Minister cut the ribbon at the opening of the new Information Centre.*

*(Air Canada photos)*



**IT WILL BE LIKE THIS**—*With the aid of a sand table model. Phil Beinhaker, head of the new airport project team, explains proposed layout of the airport at St. Scholastique to Prime Minister Trudeau and National Defence Minister Léo Cadieux.*

**L'AÉROPORT EST AINSI SITUÉ**—*À l'aide d'un modèle illustrant l'aspect général que prendra le nouvel aéroport international qui sera aménagé à Sainte-Scholastique, le directeur du projet, M. Phil Beinhaker, explique au premier ministre Trudeau et au ministre de la Défense, M. Léo Cadieux, au centre, comment seront disposés les pistes d'atterrissage sur l'emplacement.*



**COMMENT, QUAND ET POURQUOI**—*Le centre de renseignements et d'exposition inauguré officiellement par le Premier ministre, à Sainte-Scholastique.*

**HOW, WHEN AND WHY**—*New information and exhibition centre at Ste. Scholastique which the Prime Minister officially opened.*

*(Photo by Ray Stone)*



## Pioneer of flight dies in Mexico

Charles T. Travers, a former chief of accident investigation in the civil aviation branch of the department, died May 10 in Chappala, Mexico, as a result of an accident.

Mr. Travers, a pioneer of flight whose career spanned 45 years in aviation, retired from the department in November 1962. He was with the department for 25 years.

He joined the department's civil aviation branch in 1936 and was closely identified with writing Canada's air regulations and particularly with the introduction of regulations conforming to the standards of the International Civil Aviation Organization (ICAO). He was closely associated with the development of student pilot training under ICAO requirements.

## Un pionnier de l'aviation meurt au Mexique

M. Charles T. Travers, ancien chef de la Division des enquêtes sur les accidents au ministère des Transports, est décédé le 10 mai à Chappala, au Mexique, des suites d'un accident.

M. Travers, pionnier de l'aviation dont la carrière dans ce domaine embrassait une période de 45 ans, a pris sa retraite en novembre 1962, après avoir passé 25 ans au ministère.

Entré au service de la Direction de l'aviation civile en 1936, il s'est identifié à la rédaction des règlements de l'air du Canada et particulièrement à l'élaboration de règlements conformes aux normes de l'Organisation de l'aviation civile internationale (OACI). Il a été étroitement lié à la mise au point du programme de formation des élèves-pilotes, selon les exigences de l'OACI.

## Their suggestions pay dividends

Suggestions ranging from improvements to snow plows to new methods to save paint brought D.O.T. employees a total of \$490 in awards made under the department's Suggestion Award Program.



**RUSSIAN VISITORS**—An exchange of gifts and an evening of good humour marked the reception in Ottawa in June for senior officials of the USSR's Ministry of Marine. The group was in Canada to visit facilities used by Russian shipping. Here T. B. Guzhenko, First Deputy Minister of USSR Merchant Marine is seen (second from right) with His Excellency B. P. Miroshnichenko, USSR Ambassador to Canada (far right) and the host, the Hon. Don Jamieson, Federal Minister of Transport (facing camera). At left are A. A. Savelyev, President of the Soviet Union's Sovfrakht Chartering Organization, and G. Belkov of Ottawa, interpreter. Behind Mr. Guzhenko is G. V. Sveshnikov, Senior Soviet Shipping Representative to Canada.

(Ray Stone photo)

**VISITEURS RUSSES**—La bonne humeur et l'entraîné étaient de mise lors d'une réception, à Ottawa, en juin, en l'honneur d'un groupe de hauts fonctionnaires du ministère de la Marine de l'URSS. Le groupe est venu au Canada pour visiter les installations maritimes canadiennes utilisées par les navires russes. De gauche à droite, on voit M. A. A. Savelyev, président de Sovfrakht; l'interprète G. Belkov, d'Ottawa; le ministre des Transports Don Jamieson, hôte de la réception; M. G. V. Sveshnikov, représentant du commerce maritime soviétique au Canada; le sous-ministre de la Marine de l'URSS, M. T. B. Guzhenko; et l'ambassadeur de la Russie au Canada, Son Exc. B. P. Miroshnichenko.

(Photo Ray Stone)

These awards are made to employees who have submitted suggestions which are judged to be of intangible benefit to the service concerned.

Among the awards presented were: N. Steinhaur, Met. Technician, Willowdale, Ont.—\$20; W.K. Sloan, Foreman Painter, Vancouver—\$100; T.R. Macham, Technician, Chemainus, B.C.—\$25; E.M. Yetman, Communicator, Frobisher Bay, NWT—\$75; F.A. Hill, Airport Manager, Smithers, B.C.—\$50; G.L. Gordon, Radio Operator, Vancouver—\$30; H.G. Perkins, Radio Operator, Sault Ste. Marie, Ont.—\$30; A. Efting, Technician, Enderby, B.C.—\$20; M.R. Thompson, Technician, Wiarton, Ont.—\$50; E.J. Ward, Technician, Wiarton, Ont.—\$50; L.C. Knight, Technician, Ottawa—\$40; P.E. Potvin, Records, Vanier City, Ont.—\$75.



**INTERNAL AUDITORS**—E.B. Meyers, Director, Operations Review in the department is President of the Ottawa Chapter of the Institute of Internal Auditors. The Institute is primarily concerned with developing and advancing concepts of operational auditing.

AND AWAY SHE GOES—Mrs. F.M. Weston is seen cutting the ribbon which released the bottle of champagne for the christening of the CCGS Robert Foulis, while members of the official party look on. Standing behind Mrs. Weston is A.H.G. Storrs, Director of Marine Operations of the Department of Transport at Ottawa.

BAPTÊME AU CHAMPAGNE—Mme F.M. Weston, épouse du directeur régional des Services de la marine, à Dartmouth, coupe le ruban qui retient la traditionnelle bouteille de champagne qu'on voit en train de se fracasser sur la coque du n.g.c.c. «Robert Foulis». Immédiatement à l'arrière de Mme Weston, on voit M. A.H.G. Storrs, directeur des opérations de la marine au ministère des Transports.



## Another vessel joins the D.O.T. fleet

*Saint John, N.B.*—Equipped with the latest in electronic communications and navigational aids, the new lighthouse and buoy tender *Robert Foulis* was launched at a ceremony earlier this year at Saint John Shipbuilding and Dry Dock Co. Ltd.

The vessel was christened by Mrs. F.M. Weston, wife of the Regional Director of Marine Service, Halifax, and was blessed by Rev. Leonard J. Galey, minister of All Saints Church in East Saint John.

Climaxing the ceremony was Mrs. Weston smashing the traditional bottle of champagne across the vessel's prow. After this the workmen knocked loose the restraining supports and the new tender slid down the ramp into the water amidst the blaring of ships' horns and the strains of martial music.

Speaking briefly before the launching, J.E. Irving, a director of the shipyard, expressed his pleasure that the *Robert Foulis* was to remain in the Maritimes.

Mr. Irving had high praise for the Dry Dock employees, whose efforts were responsible for the building of vessels such as the *Robert Foulis*.

The tender is 104 feet long, 25 feet in breadth, with a depth of 10 feet, and it is operating in the Saint John River and Bay of Fundy area. It is powered by two 340 h.p. engines with controllable pitch propellers for extra manoeuvrability on the river.

The vessel is named after Robert Foulis, a Scottish immigrant who invented the first steam fog whistle while living in Saint John. The first of these was erected on Partridge Island in 1859.

## Pilotage officers honour Capt. Jones

As a finale to a Pilotage Conference, the Pilotage Officers honoured Captain D.R. and Mrs. Jones at a buffet dinner in Ottawa's Skyline Hotel. Last year Captain Jones relinquished his position as Superintendent of Pilotage in the Nautical and Pilotage Division to join the Pilotage Task Force as Special Adviser. He was appointed Superintendent of Pilotage in July, 1954, transferring from the post of Principal Examiner of Masters and Mates.

Captain Jones holds an Extra Master's Certificate and during the Second World War was Master in the government-owned Park Steamships on voyages covering the major trade routes of the world.

### Just to be sure

A captain who had served 50 years aboard a naval vessel had a peculiar habit. Each morning he would open a safe in the wall of his cabin, pull out a piece of paper, study it, and put it back. The officers could hardly control their curiosity.

Finally the old captain died. The executive officer raced to the captain's cabin pulled the paper from the open safe and read: "Port—left; Starboard—right".



Capt. D.R. and Mrs. Jones





## *From bridge to pulpit*



A man who went to sea as a 16-year-old deckhand and rose to command a Second World War ship on the Halifax-Murmansk route for which he was named a Member of the British Empire, is now a priest in the Anglican Church. The ordination ceremony was held earlier this year in Ottawa's Christ Church Cathedral.

The man, Frederick S. Slocombe, formerly Captain and now Reverend, served for 30 years with the Department of Transport and retired in 1967. After his retirement he entered Trinity College, University of Toronto, and was given credit for his wide theological reading and graduated early. On graduation he went to Holy Trinity Church, Pembroke, Ontario, where he is now assistant curate.

For Mr. Slocombe it seemed natural that he should turn to a second career in the priesthood when he retired. From an early age he had been associated with the church and for a time before he went to sea had been a choir boy.

Before entering the active ministry he was a lay reader in the Anglican Church for 15 years. And on top of this the long hours on a lonely watch at sea had helped to turn his mind to thoughts of religion.

Born in Cardiff, Wales, he started work at 14 in the office of shipbrokers. In 1919, he went to sea, obtaining his foreign-going master's certificate by the time he was 25 years of age.



Rev. Frederick S. Slocombe

In 1930 he came to Canada, where he started sailing on the Great Lakes. He spent six winters teaching nautical subjects at the Owen Sound Collegiate in Owen Sound, Ont.

Rev. Mr. Slocombe joined the department as examiner of masters and mates at Toronto in 1937 after he had risen to become first mate aboard the SS *Manitou*.

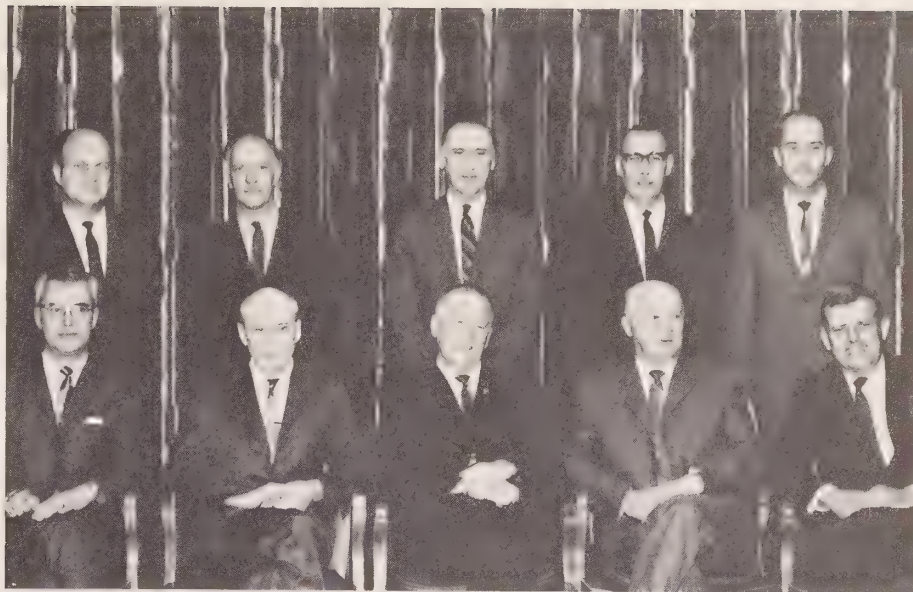
During the Second World War, he took command of the Canadian Government ship *Montcalm* on the Halifax-Murmansk route, which was heavily attacked by enemy submarines. For his services he was invested a Member of the British Empire by the Earl of Athlone, then Canada's Governor General.

After lecturing to Victory Loan audiences in war plants, Rev. Mr. Slocombe returned to his D.O.T. career and was promoted to assistant superintendent of nautical services in 1946, to supervisor of pilotage in 1952, and promoted chief of the Nautical and Pilotage Division in 1954.

Before being made a priest, Rev. Mr. Slocombe had served as a deacon, but this was in a limited capacity. For instance, he could not legally marry people, or act as a celebrant at services of Holy Communion.

Acceptance into the priesthood removed such restrictions and he is now entitled to perform any of the functions of a priest. "I trust I shall worthily fulfil the same", he told Transport.

QUARTER CENTURY OF SERVICE—Ten Western Region Air Traffic Controllers who were presented with 25-year pins and certificates. Back row, from left: Terry P. Terriff (Calgary), Clare F. Macklam (Edmonton), Gordon Smith (Edmonton), George A. Wilkins (Edmonton), Robert S. Turner (Edmonton). Front row: Emil Hryciw (Edmonton), Phillip E. Connolly (Edmonton), Gordon C. Grant (Calgary), Jack Cook (Edmonton), George W. Wright (Calgary).



# Service in Air Traffic Control—250 years

Ten 25-year pins and certificates were presented to 10 Western Region Air Traffic Controllers at a ceremony in April. This represented 250 years' service in the Public Service of Canada and a wide variety of experience in the Air Traffic Control Division.

The service of some of these personnel dates back to the last war, when they served in various capacities, such as pilot, navigator, etc. To most of them, continuing service in the Air Traffic Control field was a natural extension of their liking for flying and things connected with it.

These men have seen the development of Air Traffic Control from its start to today's radar, precision approaches, instant communications with the pilot, etc. Their

experience has been quite varied, starting with the control of aircraft in the 100-200 mile per hour range to today's jets in the 500-600 and sometimes 1000-1200 miles per hour range.

Some of them have specialized in Visual Flight Rule work, which means they operate from a control tower and oversee aircraft flying in the vicinity of an airport. Others specialized in Instrument Flight Rule work, operating from the Edmonton Area Control Centre or Calgary Terminal Control Unit. Their job is to separate aircraft flying in cloud in various areas ranging from Lethbridge-Calgary area to Edmonton-Whitehorse-Inuvik-Cambridge Bay-East Coast of Canada. Still others act as Air Movements Information Coordina-

tors, which entails keeping track of aircraft in certain areas in coordination with the military.

### Always Alert

The men find great satisfaction in this work, and the need to be alert and proficient is an over existing requirement. While on the job these men just can't afford to be lax in their duty—there is no such thing as putting off a decision until tomorrow or next week. Decisions have to be made as a situation develops and for this reason the Department of Transport gives the best in equipment, training and environment.

At the ceremony D. J. Dewar, Deputy Regional Director, made the presentation of the 25-year pins and certificates.

OFF ARCTIC MEDICAL PATROL—Arctic transportation and northern medical facilities have improved to such an extent that it was announced in June that it was no longer necessary to continue the annual medical patrols of CCGS C.D. Howe. The vessel, designed for the medical patrol, will be engaged in hydrographic studies in the Eastern Arctic.

RETIRÉ DU SERVICE MÉDICAL—Le n.g.c.c. «C.D. Howe», navire spécialement équipé pour prodiguer des soins médicaux aux populations éloignées de l'Arctique, a été retiré de ce service spécial, cette année. Il n'est plus requis pour ce travail, les services médicaux dans le Grand Nord s'étant sensiblement améliorés au cours des dernières années. Le «C.D. Howe» servira maintenant à des études hydrographiques dans l'Est de l'Arctique.





# A heart worth preserving

When we speak of the heart of our city or town do we mean the mass of steel and concrete skyscrapers in the geographic centre of the city—or do we speak of another heart, a heart which generates warmth, understanding, compassion and generosity—the human values a modern city must have if it is to beat the sterility and coldness of tall buildings and the paradox of loneliness on a crowded street?

A city is made up of people and it can be no greater than the people in it. A city has a heart and the heart is no bigger than the people who create it. As we approach another United Appeal campaign there could be no better time to reflect on this than now. The United Appeal will be reaching out to touch the hearts and minds of us all.

Many of us may be feeling increasingly satisfied over the past few years that we have provided some enlightened social legislation good enough to take care of the less fortunate of our brothers—our sick, aged, needy and handicapped brothers.

If we believe this—believe that these people are adequately cared for, that they

are getting a fair share of Canada's growing affluence—then we are deceiving ourselves.

It is easy to rationalize non-participation, to regard the United Appeal canvasser as just another doorstep irritation—to argue that our own needs come first. Past records may show that the people of our city or town give readily and generously. However, they may not have known that their money was being shared among the many voluntary agencies in the city or town. They may not know a great deal about how these agencies are operated.

It is the one bright spot in our community when we know that these agencies are at work—that they are making a vital contribution to people in need, that their work often makes the difference between existence and a decent life.

All these agencies are part of your community's heart—a heart as big as its people. It is, therefore, a heart worth preserving. We can all do what we can to help preserve this heart, to bring the dream of social justice a little closer to reality. The United Appeal is our finest instrument of charity and through it we can give our share the United way.



## United Appeal Campaigns in Canada

United Appeal campaigns are held in 145 cities, towns and villages throughout Canada.

- United Appeals and Community Chests are local, autonomous organizations administered by citizen-volunteer groups.
- There is no national United Appeal campaign directed from a central headquarters.
- In 1968 Canada's United Appeal campaigns raised over \$49-million.
- 2,300 voluntary health, welfare and recreational services received financial support.

## Continues success with DOT s'ship

Denise Stone of St. John's, Newfoundland, winner of one of the three DOT scholarships in 1964, has decided to enter the teaching profession and in the school year of 1969-70 will be teaching French at Wabush, Labrador.

When Denise got the DOT Scholarship the winning of scholarships was nothing new for her. In 1963 while a grade 10 student at Prince of Wales Collegiate she was awarded a Confederation Scholarship given by the Newfoundland Government to the top 250 students in the province, and in 1964, in addition to the DOT scholarship, she received a "Centenary of Responsible Government" scholarship of \$600.

In the fall of 1964 Denise entered Memorial University, Newfoundland, and at the end of the university year of 1968 graduated with a Bachelor of Arts (First Class).



Denise Stone

At the end of the 1969 university year she graduated with a Bachelor of Education (First Class).

She majored in French and then went to St. Pierre-Miquelon for six weeks with the aim of becoming perfectly bilingual.

Denise is the eldest daughter of R.E. Stone, District Marine Agent, St. John's.

## But where's the driver?

A motor vehicle survey has revealed that in 1940 the average number of passengers in each car on the road was 3.2 persons.

In 1950, occupancy had declined to an average of 2.1 persons. By 1960, the average was down to 1.4 persons.

If we project those statistics to 1980, every third car going by will have nobody in it.

—NSC Fleet Safety Newsletter.



Robert Turner

## New directors

The appointment of two new directors in the department was announced recently. They are Robert Turner as Director of Information Services, and Harold James Williamson as Director of the Telecommunications and Electronics Branch.

Mr. Turner was formerly a Lieutenant-Colonel at National Defence Headquarters. While serving with the Canadian Armed Forces, Mr. Turner, a native of Ottawa, specialized in the fields of information and public relations and gained extensive experience in postings in Canada as well as abroad.

Mr. Williamson was formerly acting Director of the Telecommunications and Electronics Branch. He graduated in engineering from the University of New Brunswick in 1930, and joined the department in 1937 as a field engineer, Radio Division, in Western Canada. He has held appointments in Toronto, Montreal, Edmonton and Moncton, N.B.

## Deux nouveaux directeurs

Deux nouveaux directeurs ont été nommés au ministère des Transports au cours des derniers mois. L'un d'eux, M. Robert Turner, spécialiste de l'information et des relations publiques avec les Forces canadiennes pendant une quinzaine d'années, a assumé la direction des services d'information. L'autre, M. Harold James Williamson, ci-devant directeur suppléant des télécommunications et de l'électronique, est devenu directeur du même service.

### M. Turner

M. Turner, ancien lieutenant-colonel auprès de la Défense nationale, est natif d'Ottawa. Ses fonctions dans les domaines de l'information et des relations publiques l'ont conduit en Europe et aux États-Unis.

Il est marié et père de quatre enfants.

### M. Williamson

Le nouveau directeur des télécommunications et de l'électronique est diplômé en génie civil de l'Université du Nouveau-Brunswick. Il est passé à l'emploi du ministère des Transports en 1937. Depuis 1961, il est attaché à l'administration centrale à Ottawa.



H.J. Williamson



W.E. Harrison

## New appointment

William Edward Harrison, formerly Marine Superintendent, Marine Operations Branch of the department, was earlier this year appointed Chairman, Board of Steamship Inspection. This was in addition to Mr. Harrison's appointment as Chief of the Steamship Inspection Division of the department.

Born in Rosslare, Ireland, Mr. Harrison has been with the department since 1948.

## Nouveau poste

### À M. W. E. Harrison

M. William Edward Harrison, ci-devant attaché à la Direction des opérations de la marine à titre de surintendant, est maintenant président du Bureau d'inspection des navires à vapeur.

Natif de Rosslare (Irlande), M. Harrison est au service du ministère depuis 1948. Auparavant, comme officier de marine, il avait, pendant cinq ans, commandé des navires océaniques. Au cours de la seconde guerre mondiale, il commandait des navires d'escorte de la Marine canadienne.





Miss M. A. Riddell

## Librarian retires

Miss Marianne Riddell, who had been librarian in the department since 1951, retired on May 31. Prior to her appointment as D.O.T. librarian she had held a post in the Air Services Branch library.

Born in Compton, PQ, Miss Riddell has spent most of her life in Ottawa, with the exception of the years spent in the Services during the Second World War.

## La bibliothécaire à sa retraite

Mlle Marianne Riddell, bibliothécaire du ministère depuis 1951, a pris sa retraite en fin de mai.

Née à Compton, au Québec, Mlle Riddell a cependant passé la majeure partie de sa vie à Ottawa. Après ses études secondaires, elle a commencé sa carrière à la Bibliothèque publique d'Ottawa.

En 1943, elle est passée au service de la Marine canadienne, toujours à titre de bibliothécaire. Après la guerre, elle a fréquenté les universités Carleton et McGill, où elle a obtenu son diplôme en bibliothéconomie.

## Many years in aviation

After being involved in aviation for many years—in the air and on the ground—Earl Hickson, Assistant Director, Airports and Field Operations Branch of the department, retired on June 6. He had been with the department for 32 years and before that had been a pilot with the R.C.A.F. and in commercial aviation.

Born in Norton, N.B., Mr. Hickson graduated from Teachers' College, Fredericton. And how did he become a pilot? "Well, when I saw what college presidents and professors were earning and what I could make if I was flying, it wasn't hard for me to make up my mind", he says.

He was attending University of New Brunswick when he took his pilot training with the R.C.A.F., and did aerial photography for them in the Arctic from 1928 until 1932.

He was in commercial aviation from 1934 until 1937, flying out of Rouyn, Noranda, Hudson and other northern outposts. After that he joined the Civil Aviation Branch of D.O.T. With the official opening of the Val d'Or air terminal in May, Mr. Hickson was reminded of the times he had spent in that area. "Things have changed greatly since I was there. There wasn't even a road at that time", he recalls.

In his bush pilot days Mr. Hickson worked with the mining industry and had to transport a variety of cargoes—sometimes it would be hay, at other times dynamite. The bush pilots serviced their own machines in those days "We really had to know our airplanes", says Mr. Hickson. The aircraft were not equipped with radio, and bush pilots had to be "pretty careful" where they brought their planes down if they were running short of fuel.

After joining the department Mr. Hickson was engaged in helping to lay out the trans-Canada airways system, and in the early days of the Second World War was a one-man team for the selection of sites for military airports.

When working on the selection of airport sites, he was involved in surveying and photography and had to estimate what sort

of a reception inhabitants in the area would give an air base that was established in their midst. He had to handle levels and transits, and estimate grades and drainage and the quantities of gravel that would be required. There was also the question of the price to be paid for land and the taking out of options on the land.

Mr. Hickson has served also as District Inspector, Central Airways, Winnipeg, District Superintendent, Airways, Vancouver, and Administrator of Airports.



OTTAWA RECEPTION—R. W. Goodwin, director of the Civil Aviation Branch, makes one of the presentations to Mr. Hickson at a reception held in the Golden Totem at Ottawa airport on June 6.

HOMMAGE À M. HICKSON—Le directeur de l'aviation civile, M. R. W. Goodwin, remet un cadeau-souvenir à M. Hickson au cours d'une réception en l'honneur de ce dernier à l'aéroport international d'Ottawa, le 6 juin dernier.

## Retraite bien méritée

Après une longue carrière dans les services de l'aviation au Canada, dont 32 années au ministère des Transports, M. Earl Hickson, directeur adjoint de l'exploitation des aéroports, a officiellement pris sa retraite, le 6 juin dernier.

Né à Norton, au Nouveau-Brunswick, M. Hickson semblait destiné à faire carrière dans l'enseignement après de brillantes études à l'école normale de Fredericton. Comment alors est-il devenu pilote d'aviation? «C'est simple, dit-il. Je n'ai que comparé les salaires et choisi la carrière qui me paraissait la plus avantageuse.»

Il était étudiant à l'Université du Nouveau-Brunswick quand il a commencé à suivre des cours de l'ARC. A la fin de son cours, il a fait de la photographie aérienne dans l'Arctique de 1928 à 1932.

Il s'est adonné ensuite à l'aviation commerciale de 1934 à 1937, faisant la navette entre Rouyn, Noranda, Hudson et d'autres points du Nord canadien. Il est passé au service de l'Aviation civile du ministère des Transports en 1937.

Au cours de ses premières années au ministère, il a surtout participé à la mise au point du réseau aérien du Canada. Au début de la seconde guerre mondiale, on lui a confié la délicate tâche de choisir l'emplacement des aéroports militaires canadiens. A cette fin, il lui a fallu faire des levés et de la photographie aérienne, s'occuper des réactions souvent défavorables soulevées par l'établissement de bases aériennes dans le voisinage de certaines localités, étudier les problèmes relatifs à la topographie, au drainage, aux matériaux de construction, à l'acquisition de terrains, etc.

M. Hickson a également occupé les fonctions d'inspecteur de district de la Central Airways, à Winnipeg, de surintendant de district des lignes aériennes, à Vancouver, et de gestionnaire des aéroports.

## Earl William Clark

Earl William Clark and Mrs. Clark were honoured by employees at Charlottetown Airport on April 16 to mark Mr. Clark's retirement after 27 years' service. The Airport Manager, C.R. Matheson, making a presentation to Mr. and Mrs. Clark, wished them many years of happiness. Master of ceremonies was L.L. Campbell.



**PRESENTATION ON BRIDGE**—Quartermaster Ambrose Steele receives a gift on the bridge from the Tupper's Capt. R.E. Doucette. Looking on is Mrs. Steele.

## Ambrose (Ambie) Steele

Quartermaster Ambrose Steele retired March 3 after almost 10 years with CCGS *Tupper*. He began a long and distinguished career with the department on November 1, 1935, as a seaman on the Canadian Marine Service ship *Brant*.

## Stanley P. Adlington

Stanley P. Adlington recently retired after 29 years' service with the department—all at London Airport. He was first employed by the Construction Branch in the early construction of the airport, and later as airport attendant, equipment operator and then airport mechanic.

## Walter G. Wastell

Walter G. Wastell retired March 31 after 31 years' service with the Department of Transport. Mr. Wastell started as a Radio Operator on DOT ships and later became Officer-in-Charge of various Radio Range Stations in the West. At the time of his retirement he was Executive Assistant to the Regional Director of Air Services in the Western Region, Edmonton.

## Other recent retirements in department

J. Burgess, Halifax, N.S., May 31, 21 years; Richard Bertrand, Greece's Point, April 21, 34 years; Frank Cantwell, Cape Spear, N.S., April 19, 38 years; Norman J. Cormier, Fort William, April 1, 24 years; John Joseph Cole, Halifax Airport, June 6, 20 years; Lester Humphries, Gander Airport, 20 years; Thomas Hannon, Orrville, Ont., April 8, 15 years; A.J. Van Hulle, Winnipeg, May 26, 10 years.

H. L. Land, Montreal, May 1, 37 years; P. Lake, Parker's Cove, Nfld., May 18, 25 years; Mrs. Marie C. Morin, Hull, PQ, May 18, 13 years; Henri Mercier, Ville Montmorency, PQ, May 28, 50 years; Larry McCrimmon, Ottawa, May 30, 16 years; R. F. Pattison, Saskatoon, April 29, 29 years; H. C. Risteen, Moncton, July 4, 40 years; A. Robert, Montreal, May 29, 16 years; John Edmund Tunstall, Victoria, B.C., May 5, 8 years.



# TRANS-CANADA

## Canadian pioneer of Air Mail

Ottawa—Alexander Daniel McLean, a pioneer air mail pilot in Canada who helped foster the growth of civil aviation in this country, died at his home here on May 16. Aged 73, he retired as a member of the Air Transport Board in 1962.

Mr. McLean began his career in the Royal Flying Corps and the RAF during the First World War. He flew the inaugural flight of air mail service from Ottawa to St. John, N.B. and operated an experimental air mail service in the Maritimes. In 1927, he joined the RCAF and two years later was appointed district inspector of civil aviation for Western Canada.

In 1944, Mr. McLean participated in the development of the International Civil Aviation Organization (ICAO). In 1946, he was awarded the O.B.E. for his services during the Second World War, and in 1950 was appointed a member of the Air Transport Board.

## Un pionnier du courrier aérien meurt à 73 ans

M. Alexander Daniel McLean, pionnier du courrier aérien au Canada, est décédé à son domicile d'Ottawa, le 16 mai dernier, à l'âge de 73 ans.

M. McLean a consacré sa vie entière à l'essor de l'aviation civile au Canada. Lorsqu'il a quitté les services du gouvernement, en 1962, il était membre de la Commission des transports aériens depuis 12 ans.

Il a commencé sa carrière avec la RAF pendant la première guerre mondiale. Il a plus tard effectué le vol inaugural du courrier aérien d'Ottawa à Saint-Jean, Nouveau-Brunswick. Il a également exploité un service de courrier aérien expérimental dans les Maritimes.

Il a largement contribué à la planification et à l'établissement du réseau de voies aériennes transcanadiennes et a constamment œuvré en vue d'assurer, par tous les moyens possibles, l'expansion de l'aviation civile au Canada.



**A COOL TOPIC**—The subject is Arctic icebreaking as Gordon W. Stead, Assistant Deputy Minister, Marine, left, and A. H. G. Storrs, Director, Marine Operations, talk with Captain P. M. Fournier, master of CCGS John A. Macdonald, which is engaged in the historic trip of the huge oil tanker Manhattan through the northwest passage. The scene is the National Library, Ottawa, during a break in the week-long Canadian Coast Guard Master's conference in June. Some 30 Coast Guard ship captains from across Canada met with headquarters personnel to discuss technical and administrative advances in DOT marine operations.

**UN THÈME RAFRAÎCHISSANT**—Le sujet est le déglacage dans l'Arctique alors que M. Gordon W. Stead, sous-ministre adjoint pour la Marine, à gauche, et M. A. H. G. Storrs, directeur des opérations de la marine, s'entretiennent avec le capitaine P. M. Fournier, commandant du n.g.c.c. John A. Macdonald qui prendra part cet été à l'historique voyage d'un pétrolier géant à travers le passage du nord-ouest. La scène se passe à la Bibliothèque nationale d'Ottawa au cours d'une pause lors de la Conférence des capitaines de la Garde côtière canadienne qui a duré toute une semaine. Environ 30 capitaines de la Garde côtière venant de toutes les parties du Canada ont rencontré le personnel des bureaux de l'administration centrale pour discuter des développements techniques et administratifs relativement aux opérations de la marine du ministère des Transports.

## Deputy Chief Architect

John J. Bolton, MRAIC, ARIBA, was appointed recently to the post of Deputy Chief Architect and Chief, International Terminals Division in the department's Construction Engineering and Architectural Branch. He had been Acting Deputy Chief Architect since the death last September of C. R. M. Wood.

Mr. Bolton joined the D.O.T. Air Services in November 1959, was promoted to the rank of Chief, General Building, on January 1, 1966, and held that post until Mr. Wood's death. He is a member of the Royal Architectural Institute of Canada.



John J. Bolton



# Weather Knows No Boundaries

by J. Rogalsky

As a member of the World Meteorological Organization, an agency of the United Nations, Canada is engaged in a wide variety of international endeavours in the field of meteorology. In addition to the exchange of data and forecasts, special assistance for the improvement of meteorological services has been given to a number of countries through foreign aid programs, and particularly to Commonwealth countries under the Colombo plan.

It has been recognized by international agencies that one of the primary things that can be of assistance to developing countries is the training of professional and technical staff in various disciplines. The Canadian Meteorological Service has gained an enviable reputation in the provision of this type of training service for other countries.

The Climatology Division, at Meteorological Branch Headquarters in Toronto, has pioneered in the field of machine processing of climatological data and is now recognized as one of the leaders in the development of modern methods, systems and techniques for analyzing and archiving climatological data. Several foreign Meteorological Services have selected Canada for the training of their own specialists in the design, development and implementation of climatological data processing systems.

## Technical Aid

In 1963, under the Special Commonwealth Aid to Africa Program (SCAAP), the Meteorological Branch participated in

a substantial program of technical aid to the Nigerian Meteorological Service. After a feasibility survey was completed and the program accepted by the External Aid Office, Canadian made data processing equipment was shipped to Lagos, and Nigerian technical staff were trained in Canada. A Canadian meteorologist went to Nigeria to supervise the installation of the equipment and to get the program started. Four Nigerian meteorologists and technicians have come to Toronto for training periods over the past few years, and periodic correspondence has been carried on with the Nigerian staff regarding their technical problems and progress.

A training program involving V. K. Raghavendra from India under the Colombo plan, and Sampson Masope from Ghana under the WMO Fellowship program, was recently concluded. Basically the purpose of this training program was to familiarize the students with the most modern equipment, techniques, facilities and methods for weather data processing and analysis, and was custom tailored to suit the needs of the participating countries.

The Indian Meteorological Service plans to install a medium scale computer in the near future, and the emphasis for Mr. Raghavendra was therefore in the area of computer operating systems and equipment capabilities. He also became familiar with the most effective programming languages to be used on the current generation of computing equipment.

## Canada and India

Mr. Raghavendra also found time to engage in some supplementary developmental work to empirically derive sunshine and radiation data using the computer and available historical cloud cover observations. These procedures will be useable in Canada as well as India, and even if only partially applied, Canada will have directly benefited far more than we have invested in this particular program. There were, of course, many other intangible mutual benefits derived in areas of learning, appreciation, tolerance and understanding, which will help in future programs of this kind.

The Ghanaian Meteorological Service will be utilizing a small scale computer located at the University of Ghana on a part-time basis. Their primary applications will involve quality control and tabulation of climatological data. Mr. Masope's training was, therefore, oriented to computer programming with emphasis on the production of tabulations which will be used by the Ghanaian Meteorological Service for routine publications.

Both Mr. Masope and Mr. Raghavendra were presented with certificates indicating successful completion of a technical training course in methods and procedures related to machine processing of climatic data.

The trainees expressed pleasure with the choice of Canada as the host country for their training programme, and the Meteorological Branch is looking forward to continued liaison with the recipient nations.



# Le temps se rit des frontières

par J. Rogalsky

A titre de membre de l'Organisation météorologique mondiale, une agence des Nations Unies, le Canada participe à une grande variété de projets internationaux dans le domaine de la météorologie. En plus d'échanger des données et des prévisions météorologiques, il aide tout spécialement à améliorer les services météorologiques de certains pays dans le cadre des programmes d'aide à l'étranger, particulièrement des pays du Commonwealth en vertu du plan Colombo.

Les agences internationales reconnaissent que l'un des meilleurs moyens d'aider les pays du tiers-monde consiste à former leur personnel professionnel et technique des diverses disciplines. Le Service canadien de la météorologie s'est fait une réputation enviable en fournissant ce genre de service à d'autres pays.

La Division de la climatologie, au bureau central de la Direction de la météorologie à Toronto, a fait oeuvre de pionnier dans le domaine du traitement mécanique des données climatologiques et est maintenant reconnue comme l'un des organismes les plus compétents en matière d'établissement de méthodes, de systèmes et de techniques modernes d'analyse et de mise en archives des données climatologiques. Par conséquent, plusieurs services météorologiques étrangers confient au Canada la formation de leurs propres spécialistes de la conception, du perfectionnement et de la mise en oeuvre de systèmes de traitement des données climatologiques.

## Aide technique

En 1963, la Direction de la météorologie a participé, dans le cadre du Programme spécial du Commonwealth pour l'aide à l'Afrique (SCAAP), à un vaste programme d'aide technique au Service météorologique nigérien. Après étude des possibilités et acceptation du programme par le Bureau



QUE DIT L'ORDINATEUR?—M. J. Rogalsky et M. V.K. Raghavendra vérifient l'exactitude des résultats fournis par l'ordinateur.

WHAT DOES THE COMPUTER SAY?—J. Rogalsky and V.K. Raghavendra examine the computer output for validity.

de l'aide extérieure, du matériel de traitement des données fabriqué au Canada fut expédié à Lagos et des membres du personnel technique de la Nigéria reçurent leur formation au Canada. Un météorologiste canadien se rendit à la Nigéria pour surveiller l'installation du matériel et pour mettre le programme en oeuvre. Quatre météorologistes et techniciens nigériens ont reçu une formation à Toronto, au cours des dernières années, et une correspondance périodique a été entretenue avec le personnel nigérien au sujet des problèmes et des progrès techniques.

M. V.K. Raghavendra, boursier indien du plan Colombo, et M. Sampson Masope, boursier ghanéen de l'Organisation météorologique mondiale, ont récemment terminé un stage de formation au Canada. Les deux stagiaires devaient essentiellement se familiariser avec l'utilisation des équipements, des techniques, des installations et des méthodes les plus modernes de traitement et d'analyse des données météorologiques. Ces stages ont été conçus de façon à répondre aux besoins particuliers de l'Inde et du Ghana.

Le service météorologique de l'Inde a, en effet, l'intention d'utiliser prochainement un ordinateur de dimensions moyennes. M. Raghavendra a donc reçu des cours plus poussés en informatique. Il connaît maintenant les principaux langages de programmation utilisés dans les ordinateurs de la génération actuelle.

## Coopération indo-canadienne

M. Raghavendra a également consacré une partie de son temps à des études supplémentaires en vue d'obtenir empiriquement des données sur l'insolation et le rayonnement, à l'aide d'un ordinateur et de données de nébulosité. Cette méthode pourra être utilisée au Canada autant qu'en Inde et, même s'il ne l'utilise que partiellement, le Canada aura tiré de ce programme particulier un profit supérieur aux sommes investies. Il y a, de plus, bien d'autres avantages indirects que les deux pays tireront de ce programme, dans les domaines de la connaissance, de l'appréciation, de la tolérance et de la compréhension, choses très utiles pour les programmes futurs du même genre.

De son côté, le service météorologique du Ghana utilisera bientôt à temps partiel un petit ordinateur installé à l'Université du Ghana et ses premiers travaux porteront sur le contrôle de la qualité et la tabulation des données climatologiques. Le stage de M. Masope a donc porté surtout sur la programmation des ordinateurs et la production de tableaux comme ceux que le service météorologique ghanéen établira pour des publications courantes.

MM. Masope et Raghavendra ont tous deux reçu des diplômes indiquant qu'ils ont terminé avec succès des stages techniques en méthodes et procédures de traitement automatique des données climatologiques.

Les deux stagiaires se sont déclarés très satisfaits d'avoir fait leur stage au Canada. De son côté, la Direction de la météorologie espère maintenir le contact ainsi établi avec l'Inde et le Ghana.

# end of the *MV Halhawk*

On March 22, the 18-year-old ex-fishing vessel *MV Halhawk*, en route from Canso, N.S. to Saulnierville, N.S. with a 200-ton cargo of herring, sprang a leak forward that was to end her career.

After the forward accommodation had flooded and the rudder and propeller came half out of the water, all attempts to reach nearby Jeddore became hopeless. The master, Cereno McCullough, ordered the crew to abandon ship and an inflatable liferaft was successfully launched. It would have been useless to launch a dory or boat in such conditions.

The master and crew were picked up by the vessel *Bluethroat*, emphasizing to the crew the lifesaving capabilities of these liferafts.

The vessel later drifted ashore and went aground about 150 yards off Half Island Point, near East Lawrencetown, N.S. On March 26, after four days of pounding in heavy surf, the break up was complete, with only a skeleton of the vessel remaining.

In these pictures, taken by J.S. McCallum, Steamship Inspector, Marine Regulations Branch, Halifax, the final minutes of the *Halhawk* are portrayed. With an interest in the oil pollution hazard, Mr. McCallum had been watching the vessel from the shore.

1. The *Halhawk* lies on her starboard bilge; 2, struck by a wave she is knocked almost upright; 3, the after deckhouse, complete with funnel and wheelhouse, goes over the side; 4, main hull is smashed; 5, destruction near complete; 6, the after deckhouse has come upright and the bow swings round pointing inshore, while the deckhouse heads out to sea; 7, like a sea monster, the galley funnel, supported by a section of deck, drifts further shoreward.

## Un navire de pêche fait ses adieux



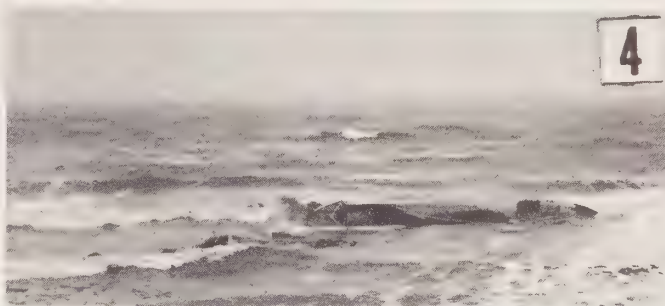
Le «Halhawk» s'incline à tribord



... une vague le redresse



... puis la timonerie s'écroule



... la coque est fracassée



... destruction presque complète



... soulèvement du pont arrière



... puis, quelques débris seulement



# Transport **ALBUM** des Transports



## **CCGS Tupper**

The Canadian Coast Guard Ship Tupper, completed and named in 1959, was built by Marine Industries Limited, Sorel, P.Q. It is a light icebreaker, supply and buoy vessel based at the D.O.T. Marine Agency in Charlottetown, P.E.I.

LENGTH: 204.6 feet

BREADTH: 42 feet

DRAFT: 14 feet

POWER: Diesel Electric, 2,900 SHP

GROSS TONNAGE: 1,358 tons

## **Le n.g.c.c. Tupper**

Le Tupper, brise-glace léger servant surtout au ravitaillement des phares et à l'entretien des bouées, est attaché à l'Agence de la marine de Charlottetown, I.P.-E. Sa construction a été achevée en 1959 aux chantiers navals de Marine Industries, à Sorel.

LONGUEUR: 204 pieds, six pouces

LARGEUR: 42 pieds

TIRANT D'EAU: 14 pieds

PUISSANCE: diesel-électrique, 2,900 cva

JAUGE BRUTE: 1,358 tonneaux

# TRANSPORT

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# CANADA

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L'IMPRIMEUR DE LA REINE POUR LE CANADA  
OTTAWA, 1969



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### COVER PHOTOGRAPH

SANTA GETTING HIS BEARINGS?—No. Santa isn't looking into the crystal ball, but paying a visit to the bridge of CCGS Camself, where he is given the opportunity of looking over navigational equipment. Perhaps he may be getting his bearings for his Christmas visits in the Victoria District of Marine Services.

### FRONTISPICE

PROCHAIN ARRÊT . . . VOYONS . . . On a déjà vu le Père Noël faire ses tournées en traîneau, en avion, à dos de cheval, en hélicoptère et comment encore. Pour lui, le temps presse et il empruntera n'importe lequel de nos moyens de transport s'il est assuré de compléter ses visites sans ennui. On le voit ici à bord du n.g.c.c. CAMSELL, probablement en train de faire le point et déterminer son prochain arrêt à la base des Services de la marine, à Victoria.

## Approaching the New Year with Confidence



## Abordons le Nouvel An avec confiance

To the many people who make up the Department of Transport I convey my best wishes for the Christmas season and the year that lies ahead. In conveying these sentiments I include not only those at headquarters and in regional offices, but those who serve the Department away from home, in ships, in lighthouses and in lonely outposts.

As the year 1969 draws to a close let us approach 1970 with confidence. We are at a time when we can review the many tasks we have accomplished and ponder on what lies ahead. In doing so, don't let us be satisfied—let us step forward with even greater strides and with even greater confidence.

As Minister of Transport I offer my sincere thanks for the service and loyalty you all have displayed in your work for the Department, and I join with you in looking forward to those new horizons and new challenges in this rapidly developing field of transportation.

A Very Merry Christmas and a Happy and Prosperous New Year to you all.

A l'approche de la saison des Fêtes, je suis heureux d'exprimer mes meilleurs vœux pour Noël et le Nouvel An à tous les employés du ministère des Transports, tant ceux de l'administration centrale et des bureaux régionaux que ceux qui servent loin de chez eux, en mer, dans les phares et dans les avant-postes solitaires.

L'année 1969 tire à sa fin; c'est le moment de passer en revue les accomplissements de l'année, de méditer les projets de l'avenir. Ne nous reposons pas sur nos lauriers; allons de l'avant à grands pas et abordons l'année 1970 avec une plus grande confiance.

En qualité de ministre des Transports, je vous remercie sincèrement de la compétence et de la loyauté dont vous avez tous fait preuve dans votre travail. Je me joins à vous pour envisager avec confiance et courage les nouveaux horizons et pour relever les nouveaux défis que le domaine des transports connaît sans cesse.

Joyeux Noël, bonne et heureuse année à tous.

Ministre

A stylized, handwritten signature in dark ink, reading "Robt Jamieson".

Minister





## CCGS John A. Macdonald bodyguard on historic experimental voyage

# *A dramatic passage — superb seamanship*

The Canadian Coast Guard icebreaker *John A. Macdonald* played bodyguard to a ship three times her size, when during September the 150,000-ton American oil tanker *Manhattan* crunched her way through Canada's historic—and stubborn—Northwest Passage.

The giant tanker, strengthened and equipped with a special icebreaking bow, was employed by a consortium of oil companies headed by Humble Oil to test the feasibility of shipping oil from a rich discovery at Prudhoe Bay, Alaska, to the eastern and European markets in specially-constructed tankers twice the size of the *Manhattan*.

During the dramatic passage, the *Manhattan* demonstrated awesome icebreaking prowess while the Northwest Passage served firm notice that it was not to be trifled with. The rugged, comparatively little *John A. Macdonald*, under the expert guidance of veteran Captain Paul Fournier, broke heavy ice on a number of occasions

to relieve pressure on the halted *Manhattan* and allow her to get under way again.

The Government of Canada welcomed the experiment which, although aimed at exploiting the enormously rich Alaska Oil strike, might well influence the development of our own resources in the north, and agreed to assist. D.O.T.'s Marine Operations were involved in helping to plan the voyage from a very early stage.

### Final Decisions

Of more importance than whether or not the *Manhattan* negotiated the Passage, actually, was the result of observing and registering, by means of a multitude of sensors and other equipment, the performance of the vessel and the kinds of ice and other problems which confronted her. Reports were to be fed into computers which, upon digesting the data, are expected to present reports on which final decisions will be based.

The *John A. Macdonald* met the north-

bound *Manhattan* off Frobisher Bay in the Davis Strait September 2 and together they set off on the 4,500-mile adventure accompanied by a U.S. Coast icebreaker.

Light ice presented no problems as the convoy visited Thule, Greenland, then proceeded to Resolute Bay and on toward Winter Harbour on Melville Island, where Canada's Panarctic Limited is drilling for oil.

And then they met the ice!

When polar ice remains frozen for several years it becomes increasingly blue and very, very hard. When it measures eight feet thick, and more, and is pressed by current and high wind against the vessels, then the problems begin.

The U.S. icebreaker *Northwind*, which had been operating on only two-thirds full power due to engine difficulties, could not cope with such formidable ice conditions and was unable to keep up. She was beset some 40 miles south of Byam Martin Island and, in waiting for her to catch up, it was



found the *Manhattan* was unable to get going again.

#### Proved her ability

The *Macdonald* proved her ability by breaking ice along the side of the *Manhattan* to relieve the pressure so that she could start. The two vessels then proceeded alone, leaving the *Northwind* to make her way westward when the pressure eased.

Helicopters are very much a part of modern Arctic travel. One of two large helicopters based on the *Manhattan* broke through the ice and tipped over. Captain Fournier reported in his log that, upon being called upon to help, "we proceeded through ten-tenths multi-year ice for four miles to where the helicopter was lying on her starboard side in a puddle and after shifting control to the navigation bridge the *Macdonald* was brought alongside the helicopter. The aircraft and one pontoon and wheel which had broken off were hoisted aboard in two lifts and secured on the helicopter landing deck. The *Macdonald* then steamed to the *Manhattan* and after securing alongside, the wrecked helicopter was placed on the main deck at port side of the tanker. We then backed off and put ourselves into the ice to await the *Manhattan* getting under way."

In telegraphing the master's report Ray Stone, a D.O.T. Information Officer, aboard, added: "These cool statements do not reveal the astounding efficiency, flashes of bravery and superb seamanship of Captain Fournier and his men. The chances of recovering the nine-passenger helicopter, which weighed over two tons and which had broken through the ice, seemed very slim. As the captain gently manoeuvred his ship's stern into position just a few yards from the chopper it seemed certain that it would disturb the ice and cause the aircraft to sink.

**EXPERTS GET TOGETHER**—In the captain's quarters of CCGS *John A. Macdonald* to discuss the trip are; from left: A. H. G. Storrs, Director of Marine Operations in the department; Capt. Paul Fournier; Capt. Thomas C. Pullen, an expert on the Arctic who was Canada's representative aboard the *Manhattan*, and (seated) T. J. Fussen, vice-president of Humble Oil.

**RÉUNION D'EXPERTS**—A bord du n.g.c.c. *John A. Macdonald*, on voit réunis chez le capitaine pour discuter du voyage, de gauche à droite: M. A. H. G. Storrs, Directeur des opérations de la marine du Ministère, le capitaine Paul Fournier, le capitaine Thomas C. Pullen, expert de l'Arctique, représentant le Canada à bord du *Manhattan* et, (assis) M. T. J. Fussen, vice-président de la société Humble Oil.

#### Grateful amazement

"Members of the *Macdonald* crew were lowered to the ice where they quickly clambered atop the chopper and secured the cable. After a co-ordinated shifting of the ship and the winch the helicopter was quickly lifted onto the deck. The reaction on the *Manhattan* when we presented them with their damaged chopper was one of grateful amazement."

The *Manhattan* was stopped repeatedly in the pressure of multi-year ice in McClure Strait. Each time the *Macdonald* eased the pressure by slicing through the bright blue, ten-foot-thick ice so that the *Manhattan* could again get underway.

At last the formidable McClure Strait, through which no westbound ship has sailed, brought the convoy to a stop. The *Manhattan*, with relatively little power in reverse, was unable to employ effectively the *John A. Macdonald's* technique of charging the ice, reversing quickly, and charging again.

It was decided to put the *Manhattan* in reverse to get out of the huge iceflow in which she was trapped and proceed back to Prince of Wales Strait, on the east side of Banks Island, with the *John A. Macdonald* providing a tow if necessary. But the track was frozen behind them and progress seemed impossible.

Then, the *Manhattan* shut down all her heating facilities and other services which required power from her engines. With full steam, and every ounce of energy directed to her propellers, the huge tanker smashed into the stubborn ice and kept going to the Prince of Wales Strait. Following a battle with very tough ice at the mouth of the strait, they broke into clear water and it was plain sailing through the strait to Sachs Harbour on the west side of Banks Island.

#### Canadian skill

The *John A. Macdonald* had put on an impressive performance in showing how skilled Canadians handle ice in Canada.

While summing up at a press conference in Sachs Harbour, Stanley B. Haas, in charge of the project for Humble Oil, said:

"I don't believe that our ship really could have made it through the Northwest Passage, as you gentlemen are aware, without the aid and the assistance of the *John A. Macdonald* at critical passages in the voyage. Obviously, it might have taken a lot longer or we might have stayed certainly very much longer without the able assistance of Captain Fournier, who, we think on the *Manhattan*, has displayed extraordinary icebreaking ship handling capabilities."





QU'EN PENSEZ-VOUS?—Le capitaine Paul Fournier en conversation avec M. A. H. G. Storrs, Directeur des opérations de la marine, sur le pont du *John A. Macdonald*.

WHAT DO YOU THINK?—Capt. Paul Fournier and Director of Marine Operations, A. H. G. Storrs, have a talk on the bridge of the *John A. Macdonald*.

## Sans le «John A. Macdonald», un voyage peut-être impossible

Le brise-glace *John A. Macdonald* de la Garde côtière canadienne a servi d'escorte à un navire trois fois plus gros que lui, l'été dernier, lorsque le navire-citerne américain *Manhattan*, d'une jauge de 150,000 tonneaux, s'est frayé un chemin dans le passage du Nord-Ouest, voie maritime historique mais réfractaire du Canada.

Ce pétrolier géant, renforcé et muni d'une proue spéciale pour le déglacement, a été utilisé par un consortium de sociétés pétrolières dirigées par la société Humble Oil afin d'éprouver la possibilité d'expédier du pétrole d'un riche gisement, de Prudhoe Bay (Alaska) aux marchés de la côte est et aux débouchés européens, dans des navires-citernes spécialement construits et deux fois plus gros que le *Manhattan*.

Au cours de ce voyage dramatique, le *Manhattan* a exécuté de formidables prouesses de déglacement, brisant la résistance tenace du passage du Nord-Ouest. Le robuste, mais relativement petit, *John A. Macdonald*, sous la gouverne experte d'un

marin chevronné, le capitaine Paul Fournier, a brisé d'épaisses glaces à maintes reprises pour dégager le *Manhattan* immobilisé et lui permettre de reprendre sa route.

Le gouvernement du Canada a bien accueilli cette expérience qui nous a fourni des données qui serviront à l'exploitation de nos propres ressources du Nord, et il a accepté d'y apporter son concours. La Direction des Opérations de la marine du ministère des Transports a contribué à la préparation du voyage dès le début.

### Décisions finales

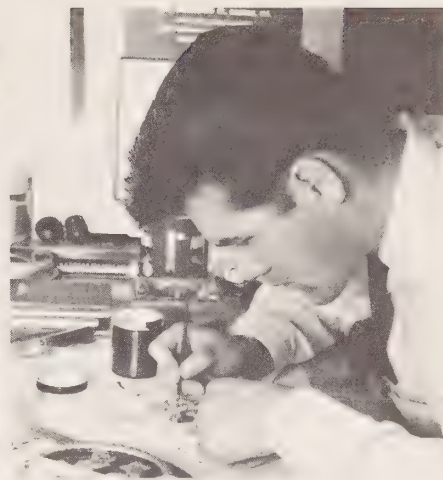
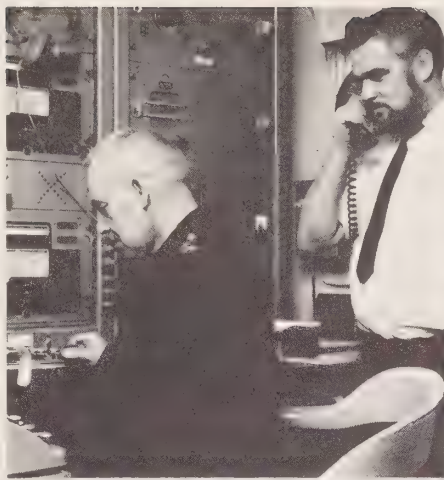
Que le *Manhattan* ait réussi ou non à vaincre le passage, le résultat des études et des observations faites, à l'aide d'une multitude de détecteurs et d'enregistreurs, sur le comportement du navire dans les glaces, est le bagage le plus important de l'expédition. Ce résultat doit être étudié par des ordinateurs qui, en regroupant les données, fourniront des rapports sur lesquels se fonderont les décisions à prendre.

Le *John A. Macdonald* a rencontré le *Manhattan* au large de Frobisher Bay, dans le détroit de Davis, le 2 septembre et c'est alors que les deux navires se sont lancés ensemble pour un voyage de 4,500 milles, en compagnie d'un brise-glace de la Garde côtière américaine.

Le convoi n'a éprouvé aucune difficulté à vaincre une couche de glace peu épaisse en visitant Thulé, au Groenland. Il poursuivit sa route en passant par Resolute Bay puis par Winter Harbour, sur l'île Melville, où la société canadienne Panarctic Limited effectue de la prospection pétrolière.

C'est là que l'aventure dans les glaces commença.

Lorsque les glaces polaires demeurent gelées pendant plusieurs années, elles bleuissent et deviennent très dures. Et lorsque la couche a huit pieds d'épaisseur et qu'elle est poussée contre les navires par le courant et les vents, on peut deviner l'étendue des difficultés auxquelles des bâtiments s'exposent en s'y lançant.



**TECHNIQUES DE NAVIGATION**—M. A. H. G. Storrs profite du voyage du *John A. Macdonald* et du *Manhattan*, pour pratiquer ses techniques de la navigation.

**NAVIGATION TECHNIQUES**—A. H. G. Storrs practises his navigation techniques during the voyage of the *John A. Macdonald* with the *Manhattan*.

**SURPLUS DE TRAVAIL**—les opérateurs pour radio Chris Kristensen et Lorne Good travaillent jour et nuit pour faire face au surplus des communications.

**RADIO TRAFFIC**—It was a busy trip for Radio Operators Chris Kristensen and Lorne Good, who worked around the clock to handle the extra radio traffic.

**UN SOUVENIR**—M. Jean Rochette, commissaire du *John A. Macdonald*, met la dernière touche à un écusson de la Garde côtière canadienne qui sera remis au *Manhattan*.

Photos de Ray Stone

**SOMETHING TO REMEMBER**—Jean Rochette, Purser of the *John A. Macdonald*, puts finishing touches to a Coast Guard crest presented to the *Manhattan*.

Ray Stone photos

Le brise-glace américain *Northwind*, dont les machines ne tournaient qu'aux deux tiers du plein régime à cause de problèmes mécaniques, ne pouvait faire face à de telles conditions et dut s'arrêter. Il fut immobilisé dans les glaces à quelque 40 milles au sud de l'île Byam Martin et, en attendant que le brise-glace puisse rattraper le convoi, le *Manhattan* devint incapable de poursuivre sa route.

#### Preuves de ses aptitudes

Le *Macdonald* a fait ses preuves en brisant la glace le long du flanc du *Manhattan* afin de desserrer l'étau qui le retenait captif. Puis les deux navires continuèrent seuls, laissant le *Northwind* faire route vers l'Ouest quand l'emprise se relâcherait.

De nos jours, l'hélicoptère fait presque obligatoirement partie des voyages dans l'Arctique. L'un des deux gros hélicoptères du *Manhattan* s'enfonça dans la glace. Le capitaine Fournier écrit dans son journal de bord, qu'après avoir reçu un appel de secours: «le *Macdonald* se fraya un passage sur une distance de quatre milles à travers une épaisse couche de glace vieille de plusieurs années et nous atteignîmes l'hélicoptère qui gisait sur le flanc droit dans une grande flaque. Commandé de la passerelle, le *Macdonald* exécuta sa manœuvre et vint se ranger le long de l'hélicoptère. L'appareil, de même qu'un ponton et une roue qui s'en étaient détachés, furent hissés à bord en deux opérations et amarrés sur l'aire d'appontage pour hélicoptères. Le *Macdonald* se dirigea ensuite vers le

*Manhattan* et, après l'avoir accosté, on transborda l'épave de l'hélicoptère sur le pont principal arrière à bâbord du pétrolier. Le *Macdonald* fit alors machine arrière pour se garer dans la glace en attendant le *Manhattan*. »

Ray Stone, agent d'information du ministère des Transports, qui se trouvait à bord, ajoutait, après avoir télégraphié le compte rendu du capitaine: «Tous ces froids communiqués ne disent rien de l'efficacité surprenante, de l'audace et des qualités de marin du capitaine Fournier et de ses hommes. Les chances de récupérer l'hélicoptère d'une capacité de neuf hommes et d'un poids de plus de deux tonnes, qui s'était enfoncé dans la glace paraissaient très minces. Pendant que le capitaine manœuvrait pour amener doucement l'arrière de son navire à l'endroit voulu à quelques pieds seulement de l'hélicoptère, il semblait que le déplacement du navire allait sûrement disloquer la glace et faire couler l'appareil.»

#### Étonnés mais reconnaissants

«Des membres de l'équipage du *Macdonald* furent descendus sur la glace, d'où ils grimpèrent rapidement sur l'hélicoptère pour y attacher un câble. Après un déplacement coordonné du navire et du treuil, l'hélicoptère fut rapidement hissé sur le pont. Lorsque nous leur avons remis leur hélicoptère endommagé, les membres de l'équipage du *Manhattan* en furent étonnés mais reconnaissants.»

La pression des épaisses couches de glace

dans le détroit de McClure empêcha plusieurs fois le *Manhattan* d'avancer. Chaque fois, le *Macdonald* diminua la pression en coupant cette glace bleu clair de dix pieds d'épaisseur, afin que le *Manhattan* pût se remettre en route.

Enfin, le redoutable détroit de McClure, qu'aucun navire n'a auparavant réussi à traverser vers l'ouest, réussit à arrêter le convoi. Le *Manhattan*, dont la puissance en marche arrière est très faible, n'a pu utiliser de façon efficace la méthode du *John A. Macdonald*, qui est de foncer dans la glace, de reculer rapidement, puis de foncer de nouveau.

On décida donc que le *Manhattan* ferait marche arrière afin de sortir du banc de glace qui l'emprisonnait et de retourner au détroit du Prince de Galles, du côté est de l'île Banks. Le *John A. Macdonald*, le remorquant au besoin. Mais les glaces se refermèrent derrière lui et il semblait impossible de bouger.

Alors, le *Manhattan* ferma les soupapes de toutes ses installations de chauffage et des autres services qui réduisaient la puissance de ses machines. Puis, à pleine vapeur, toute la puissance de ses machines concentrée sur ses hélices, l'énorme navire fracassa la glace rebelle pour atteindre le détroit du Prince de Galles. Après avoir lutté contre une glace très dure à l'entrée du détroit, le navire, dégagé, vogua dans les eaux libres de glace du détroit jusqu'à Sachs Harbour sur la rive ouest de l'île Banks.

(suite à la page 8)



## Radio operators in training

July 18 was a red letter day for Garth Pudwell, 18, of Medicine Hat, Alta., for on that day he became the 1,000th student to graduate in radio operator training from the department's Air Services Training School in Ottawa.

On hand to congratulate Garth at the ceremony was R. W. Anderson, an instructor at the school, who was the school's first graduate in October, 1960. After the ceremony Garth was bound for Coppermine, NWT, to put into practical use the things he had learned at the school.

Other students who graduated as radio operators: Quebec Region—Bernard Blais, Montreal; Normand Forand, Montreal; Eugene-Gilles Forest, Labelle; Filippo Foti, Laval-des-Rapides; Pierre Gagnon, Ste-Foy; Xavier Matz, Candiac; Gilles Ouimet, Montreal; Pierre Poirier, Montreal; Richard Richer, Longueuil. Central Region—Robert Gibson, Winnipeg; Western Region—Gordon Scade, Edmonton.

Educated at Alexander Junior High and Medicine Hat High School, Garth Pudwell heard about the department's radio operator school and the opportunity to *Earn While You Learn* from school circulars. It was the encouragement given by his high school electronics teacher that prompted him to apply for training with the department.

### Great opportunities

Speaking on behalf of his fellow graduates, Bernard Blais said they were all on the threshold of a new career and were facing great opportunities. "I hope to express the feelings of my classmates by saying that there exists a debt of gratitude between us and those responsible for our training. I believe, in all honesty, that in order to pay that debt we should endeavour to maintain our knowledge at the level it has attained here.



1,000TH GRADUATE—Here H. J. Williamson, Director of the Telecommunications and Electronics Branch, presents the certificate to Garth Pudwell of Medicine Hat, Alta., the 1,000th student to graduate in radio operator training.

LE 1,000<sup>ème</sup> DIPLÔMÉ—M. H. J. Williamson, directeur des télécommunications et de l'électronique, remet un certificat à Garth Pudwell de Medicine Hat (Alberta) qui est le milli<sup>ème</sup> étudiant à recevoir le diplôme d'opérateur radio.

"We have understood that this rigorous training was meant to be our springboard towards some of the highest positions in this department. If the push it gives us, sirs, should bring us to fill the position of one of you, we hope that this shall give you the satisfaction that you hoped for in establishing the high standards."

In a farewell to the school, Mr. Blais added: "In a few minutes we will be leaving this establishment, maybe a little tired, but without doubt much the wiser."

A. A. Johnson, Superintendent of the Air Services School, presided at the graduation ceremony, and the address was given by H. J. Williamson, Director of the Telecommunications and Electronics Branch.

Addressing the graduates, Mr. Williamson assured them that there are people in the department who care about them. "When things appear to be a little depressing and you are down in the mouth there is somebody somewhere along the line who wants to hear your problems and make your working conditions as best as possible. I wish everyone of you success in your chosen career."



No. 1 MEETS No. 1,000—R. W. Anderson, right, an instructor at the Air Services Training School in Ottawa, who was the school's first graduate in 1960, congratulates Garth and wishes him good luck.

LE 1<sup>er</sup> FÉLICITE LE 1,000<sup>ème</sup>—M. R. W. Anderson, à droite, instructeur à l'école des Services de l'Air d'Ottawa et premier diplômé de l'école en 1960, félicite Garth et lui souhaite bonne chance.

(suite de la page 7)

### Habileté des Canadiens

Le *John A. Macdonald* a démontré d'une façon impressionnante la façon dont les Canadiens savent se tirer d'affaire dans les glaces de nos régions septentrionales.

A une conférence de presse tenue à Sachs Harbour, M. Stanley B. Haas, chargé de l'entreprise pour le compte de la société Humble Oil, a déclaré:

«Je ne crois pas qu'à certains moments critiques du voyage notre navire ait pu se frayer un chemin à travers la glace dans le passage du Nord-Ouest sans l'aide et le concours du *John A. Macdonald*. En tout cas, si nous y avons réussi, il nous aurait fallu beaucoup plus de temps sans l'habile concours du capitaine Fournier qui, de l'avis des membres de l'équipage *Manhattan*, a fait preuve d'un talent extraordinaire dans la manœuvre de son brise-glace.»

# Plus de 1000 opérateurs radio formés à l'école des Services de l'Air d'Ottawa

Le 18 juillet 1969: Garth Pudwell, 18 ans, de Medicine Hat (Alberta) n'oubliera pas cette date de sitôt. C'est ce jour-là en effet qu'il devint le 1000e opérateur radio à recevoir son diplôme de l'école de formation des Services de l'Air d'Ottawa.

M. R. W. Anderson, qui enseigne aujourd'hui à l'école mais qui, en octobre 1960, avait été le premier à en être diplômé, a assisté à la cérémonie de remise des diplômes et a félicité Garth Pudwell et ses camarades de la même promotion. A la suite de la cérémonie, Garth devait se rendre à Coppermine (T.N.-O.) pour mettre en pratique les connaissances qu'il avait acquises à l'école.

Les autres membres de la promotion étaient, pour la région de Québec: Bernard Blais, de Montréal; Normand Forand, de Montréal; Eugène-Gilles Forest, de Labelle; Filippo Foti, de Laval-des-Rapides; Pierre Gagnon, de Sainte-Foy; Xavier Matz, de Candiac; Gilles Ouimet, de Mon-

tréal; et Richard Richer, de Longueuil. Pour la région centrale: Robert Gibson, de Winnipeg; et, pour la région de l'Ouest: Gordon Scade, d'Edmonton.

Parlant au nom de ses camarades diplômés, Bernard Blais a dit qu'au seuil d'une nouvelle carrière, tous considéraient la vie avec un grand optimisme. «J'espère exprimer les sentiments de mes camarades en disant que nous avons une dette de gratitude envers ceux qui ont veillé à notre formation. En toute honnêteté, a-t-il ajouté, je crois que pour rembourser cette dette, nous nous devons de maintenir nos connaissances au niveau qu'on nous a permis d'atteindre ici.»

«Nous avons compris que cette formation rigoureuse devait être notre tremplin vers les plus hautes fonctions dans ce Ministère. Si l'élan qu'elle nous donne, messieurs, nous permet un jour de remplir les fonctions de l'un d'entre vous, nous espérons que les espoirs que vous nourrissez en établissant

ces hautes normes seront alors satisfaits.»

Faisant ses adieux à l'école, Bernard Blais a dit encore: «Dans quelques minutes, nous devons quitter cet établissement, un peu fatigués peut-être, mais certainement plus sages.»

M. A. A. Johnson, surintendant de l'école des Services de l'Air, a présidé la cérémonie de remise des diplômes. M. J. H. Williamson, directeur des Télécommunications et de l'Électronique, a prononcé une allocution de circonstance.

Assurant les nouveaux diplômés de la sympathie du Ministère, M. Williamson leur a demandé de ne pas hésiter à parler à leurs supérieurs de tout problème qu'ils auraient. «Il y aura toujours quelqu'un pour vous entendre et améliorer vos conditions de travail, dans toute la mesure du possible». M. Williamson a conclu en exprimant aux nouveaux diplômés ses meilleurs vœux de succès dans leur carrière.



**RESCUE TRAINING**—RCMP officers have joined with the Helicopter Unit at Prince Rupert, B.C. in training sessions to familiarize the RCMP with the capabilities of the department's S-61 helicopter in certain emergencies. Here is rubber boat practice at Seal Cove.

**EXERCICE DE SAUVETAGE**—Des agents de la Gendarmerie royale du Canada ont participé, avec le service des hélicoptères de Prince-Rupert (C.-B.), à des exercices visant à les former au maniement des hélicoptères S-61 du ministère des Transports. Ces appareils doivent servir dans certains cas d'urgence. Sur notre photo, un exercice au radeau pneumatique à Seal Cove.



**GENTLY DOES IT**—Engineer "Sandy" Vriesinga hoists "victim" Bill Sheppard into the S-61. In the helicopter are RCMP Consts. Elliott and McLeery, watched on the ground by Consts. Brown and Zimmerman and pilot Porter. Pilots of the S-61 are R. McGowan and A. Service.

Photos by Const. T. Nelson. RCMP

**HISSAGE DE LA «VICTIME»**—Le mécanicien «Sandy» Vriesinga hisse la «victime» Bill Sheppard à bord du S-61. Dans l'hélicoptère, les agents Elliott et McLeery, de la GRC, observés au sol par les agents Brown et Zimmerman, et le pilote Porter. R. McGowan et A. Service pilotent l'appareil.

Photos prises par l'agent T. Nelson, de la GRC





# Weather map history in Canada

by Ron Miller  
*Supervisor of Public Information  
 Meteorological Branch Headquarters*

"Geography is about maps and chaps" goes a schoolboy aphorism. The same might be said about meteorology. Indeed from the beginnings of the science, meteorologists have considered maps an essential tool to describe the state of the atmosphere and to communicate this knowledge to others. Today this simple truth should be evident to everyone who has watched the presentation of weather information, by a "TV Weatherman" using a map, chalk, pointer, and other accoutrements of his trade.

Although meteorology is a young science, it is possible in the latter half of the twentieth century to talk of historical weather maps. Just as the maps of the early explorers and geographers were often inaccurate and rather crude, the early weather maps reflected the lack of meteorological knowledge, the limitations imposed by poor or non-existent communications, and the imprecision of early weather observations. Aside from their meteorological significance, however, the maps tell much about the times in which they were drawn.

The Meteorological Branch in the past year has completed, in cooperation with the Central Microfilming Unit in Ottawa, the placing on microfilm an almost complete series of weather charts dating back to the beginning of the Meteorological Service of Canada in 1871.

The charts show successive stages in the development of Canadian weather maps. The map for Thursday, January 6, 1874, for example, shows the coverage of observations restricted almost exclusively to the eastern half of the United States, southern Ontario and Quebec and the Maritime provinces. This coverage represented the geographic limits from which the relatively new telegraph lines could relay information. Although by that year there was a considerable population in the western half of the continent, there is little in the way of weather data. One is tempted to write "terra incognita"—or at least as far as weather information is concerned.

## Use rather vague

The weather information plotted about each location circle is also interesting. It included a temperature and surface pressure reading, an indication of cloud cover, and surface wind speed and direction. Pressure tendency, humidity readings, or other measured values which are routine today were not shown. Indeed, even the use that the public could make of the map was rather vague. No attempt to predict or forecast the weather was being made at that time. A statement on similar maps being issued by the United States Signal Service at the time simply said they were for the benefit of commerce. It was obviously up to the recipient of each map to derive his own benefit from it. Place names are also worth noting—Garry not Winnipeg marked the junction of the Red and the Assiniboine, and Toronto is not indicated by name although Kingston achieves this distinction.

By January 25, 1900, weather observations were being taken from Atlantic to Pacific. The station plot had changed little but at least someone was doing something about the weather. The first forecasts were issued in Canada in 1877 although a storm warning service had been instituted a year earlier in 1876. By 1900, the forecasts were written on the weather map which was then distributed by messengers and mail delivery.

By 1936, important changes had been made to the Canadian Weather Map. The information plotted around each station circle included pressure tendency and most of the basic data as plotted today. An important feature was the introduction of fronts on weather maps. The theory of weather fronts had first been formulated by Bjerknes, the Norwegian meteorologist, in the early part of the century. During the 1930's Canadian meteorologists began making use of fronts to explain weather changes.

## During and after war

The rapid expansion of meteorological services during the Second World War saw many changes to the Canadian Weather Map. Data from ships enabled meteorologists to plot and draw the weather patterns over ocean areas. Canadian meteorologists won a degree of fame for their skill in predicting the behaviour of the fickle turbulent atmosphere over the North Atlantic—an important reason for the success of the many flights which took place in ferrying aircraft to the European war zone.

In the post-war years the weather maps took on a new appearance. Weather infor-



mation from the Joint Arctic Weather Stations became available after 1947. Balloon radiosondes ascending to high altitudes on a regular basis, launched from sites across the country, allowed maps to be drawn depicting a horizontal plane or layer of the atmosphere at selected levels. For the first time meteorologists were able to use charts to understand the three-dimensional structure of the atmosphere.

Today the Canadian weather map is a sophisticated version of its earlier self. The base map (without the plotted data) is a stereographic projection with a standard parallel at 60°. The surface base charts are usually two-colour maps of tan and blue. Elevations are delineated by using combinations of the colours in different tints. All the map details (coastal outlines, station circles) are fairly faint to avoid any detracting from the chart's main function, which is to carry the plotted weather data and the subsequent analysis.

#### Plotting of data

The maps are designed by Meteorological Branch specialists and printed commercially. They are printed in three main scales depending on the total area to be covered. In Canada the data is still completely plotted by hand at main weather offices although an experimental machine which has been developed in the U.K. for the automatic plotting of weather information on a map is being watched closely. When the data has been plotted on the map, it is ready to be analysed by a forecaster, who can draw in the fronts and pressure systems which in turn will aid him in preparing his forecasts.

At the Central Analysis Office (CAO) in Montreal, maps are printed out automatically by an ingenious map drawing machine as a form of output from a computer into which basic data has been fed. It is expected that in future charts will be increasingly prepared in this manner. Completed weather maps are ideally suited for Canada-wide transmission by facsimile. Analysed maps from the CAO at Montreal can be made simultaneously available across the country, saving many man-hours of effort which would be required if each weather office had to plot and analyse its own charts.

Photographs from outer space taken by weather satellites now give us a new type of map which is, in a sense, a total pictorial representation of the earth's surface viewed from space. After almost a hundred years of progress, the story of the weather map is, I am sure, far from ended.



COME ON THEN—PULL!—Competitors strain their muscles in the tug-o'-war competition at the department's annual picnic in Vincent Massey Park.

HO HISSE!!—Les concurrents bandent leurs muscles dans le concours de lutte de traction à la corde qui a eu lieu à l'occasion du pique-nique du ministère dans le parc Vincent Massey.



READY TO FLY—OR FALL—A young competitor in the sack race at the department picnic is watched by Deputy Minister O. G. Stoner and his Executive Assistant, D. A. McDougal

PRÊT À VOLER À LA VICTOIRE—Une jeune concurrente de la course en sac au pique-nique du ministère s'élance sur la piste sous l'œil du sous-ministre M. O. G. Stoner et de son chef de cabinet M. D. A. McDougal



# Historiques des cartes météorologiques

par Ron Miller

*Préposé à l'information publique,  
Direction de la météorologie*

«La géographie parle de cartes et de gens qui les préparent» dit un aphorisme d'écolier. On pourrait en dire autant de la météorologie. Il est vrai que, depuis les débuts de cette science, les météorologistes ont considéré les cartes comme outils essentiels pour décrire l'état de l'atmosphère et communiquer ces renseignements aux autres. De nos jours, cette vérité saute aux yeux de tous ceux qui voient le météorologiste évaluer à la télévision à l'aide de cartes, craies, baguettes et autres artifices de son métier.

Bien que la météorologie soit une science récente, il est possible, dans la seconde moitié du vingtième siècle, de faire l'histoire des cartes météorologiques. Tout comme les cartes des premiers explorateurs et géographes étaient inexactes et assez grossières, les premières cartes météorologiques témoignaient du manque de connaissances dans ce domaine, des limitations imposées par des moyens de communications inadéquats ou inexistantes et de l'imprécision des observations météorologiques. Indépendamment de leur signification météorologique, les cartes révèlent tout de même beaucoup de choses sur l'époque à laquelle elles ont été établies.

Au cours de l'année dernière, la Direction de la météorologie a, en collaboration avec l'unité centrale de microfilms à Ottawa, reproduit sur microfilms des séries presque complètes de cartes météorologiques qui remontent aux débuts du Service météorologique du Canada, en 1871.

Les tableaux indiquent les diverses étapes franchies dans la mise au point des cartes météorologiques canadiennes. Par exemple, la carte établie pour le jeudi 6 janvier 1874 révèle que l'étendue des observations est limitée presque exclusivement à la moitié orientale des États-Unis, au sud de l'Ontario, au Québec et aux provinces maritimes. Cette étendue représentait les limites géographiques en dedans desquelles les lignes télégraphiques relativement nouvelles pouvaient retransmettre des informations. La moitié occidentale du continent était quand même assez peuplée à cette époque, mais il n'existait pas grand-chose en matière de données météorologiques.

## Information insuffisante

Les cartes météorologiques de cette époque renfermaient une information qui nous

serait aujourd'hui absolument insuffisante pour établir une prévision du temps. Elles donnaient en effet une indication de la température et de la pression en surface, de la nébulosité, et de la vitesse et de la direction du vent en surface. La tendance barométrique, la mesure de l'humidité ou d'autres indices qui constituent de nos jours une information essentielle, n'étaient pas notées. En fait, même le parti que le public pouvait tirer des cartes était assez vague.

À l'époque, aucun essai de prévision météorologique n'était effectué. Une déclaration relative à des cartes analogues publiées à l'époque par l'*United States Signal Service* se bornait à indiquer qu'elles étaient établies à l'usage du commerce. Il était évident qu'il appartenait au destinataire de chaque carte d'en faire son propre profit. Les noms des localités sont également dignes d'être mentionnés: Garry et non Winnipeg marquait le confluent des rivières Rouge et Assiniboine, et Toronto n'est pas nommément désigné alors que Kingston a cet honneur.

C'est le 25 janvier 1900 qu'on commença à noter les observations météorologiques de l'Atlantique au Pacifique. Le pointage des stations avait peu évolué mais, du moins, on s'attaquait enfin au problème du temps à l'échelle du continent. Les premières prévisions furent cependant publiées au Canada en 1877 bien qu'un service d'avertissement de tempête ait été institué au début de 1876. En 1900, les prévisions furent consignées sur la carte météorologique qui était alors distribuée par des messagers ou expédiée par la poste.

En 1936, d'importantes modifications furent apportées aux cartes météorologiques canadiennes. Les renseignements reportés autour de chaque cercle de station comportaient la tendance barométrique et la plupart des données de base qui y figurent aujourd'hui. Une innovation importante fut l'introduction de fronts météorologiques sur les cartes. La théorie des fronts météorologiques avait pour la première fois été formulée par le météorologiste norvégien Bjerknes au début du siècle. Au cours des années 30, les météorologistes canadiens commencèrent à utiliser les fronts pour expliquer les changements de temps.

## Pendant et après la guerre

L'expansion rapide des services météorologiques au cours de la seconde guerre mondiale apporta de nombreuses modifications aux cartes météorologiques ca-

nadiennes. Les données recueillies à partir de navires permirent aux météorologistes de pointer et d'établir la situation météorologique dans des régions océaniques. Les météorologistes canadiens connurent le comble de la gloire pour leur habileté à prévoir le comportement de l'atmosphère turbulente changeante au-dessus de l'Atlantique-Nord (élément important du succès de nombreux vols d'aéronefs destinés à l'Europe).

Dans les années d'après-guerre, les cartes météorologiques prirent un nouvel aspect. Après 1947, on commença à exploiter des stations météorologiques dans l'Arctique. Des ballons de radiosondage qui s'élèvent régulièrement à de hautes altitudes, lancés de divers lieux dans tout le pays, permettent aujourd'hui d'établir des cartes fournissant des données sur les diverses couches de l'atmosphère à des niveaux choisis.

La carte météorologique est donc devenue un document précieux renfermant à peu près toutes les données possibles sur les conditions atmosphériques. La carte de base (sans les données pointées) est constituée d'une projection stéréographique avec un parallèle normal à 60°. Les cartes de base de surface sont généralement réalisées en deux couleurs, havane et bleu. Les altitudes sont délimitées par l'emploi des couleurs en différentes nuances. Tous les détails de la carte (lignes côtières, cercles de stations) sont représentés assez légèrement afin d'éviter que le lecteur ne soit distrait du but essentiel de la carte qui est d'indiquer les données météorologiques pointées et l'analyse qui en découle.

## Pointage des données

Les cartes sont conçues par les spécialistes de la Direction de la météorologie. Elles sont imprimées à trois principales échelles en fonction des dimensions totales de la région qui doit être couverte. Au Canada, les données sont pointées entièrement à la main dans les principaux bureaux météorologiques. On surveille cependant de très près actuellement une machine expérimentale qui, au Royaume-Uni, sert au pointage automatique des renseignements météorologiques sur une carte. Lorsque les données ont été pointées sur la carte, elle est prête à être analysée par un prévisionniste qui peut dessiner les fronts et les systèmes de pression, lesquels, à leur tour, l'aideront à établir les prévisions.

(suite à la page 15)



WORK ON NEW BLACKBURNE TERMINAL



LOCAL WORKMEN LEVEL APRON



CROWD AT OPENING CEREMONY

## Montserrat Project

# Helping to put Caribbean Island on the air map

by G. L. Lennox, MRAIC, ARIBA,  
*Architect i/c Special Projects,  
Interior Design & Fine Arts Section.*

I have recently learned to drink rum and dance a calypso without backache, and, at the same time, see some of our country's efforts to help others less fortunate. It all started like this . . .

One morning my "dolce far niente" was cruelly shattered by the Chief Architect assigning me to the Montserrat project. Was Montserrat in the Arctic, Quebec, Brazil or was it a code word for a new telecom satellite? I just didn't know.

I searched through areas in North America, Europe, Africa, and the Middle East to no avail. Then away down south in the Atlantic, quite near the equator, in the pirates' happy hunting grounds of the Lesser Antilles, a little emerald island named Montserrat appeared.

This was it. The island, originally discovered by Columbus, had been chosen by the Canadian International Development Agency for a new air terminal building, aircraft apron, taxiway and cold storage facilities for local agricultural exports.

The "fly boys" in Civil Aviation and the "economic wizards" from the Hunter Building helped to produce a concept acceptable to all, and in May 1968 Canada and Montserrat signed a Memorandum of Understanding.

Our work started in earnest and under pressure. After a lunch in one of the new Ottawa skyscrapers, I produced an optimistic time schedule, which was approved, and which announced completion of the project in the summer of 1969. I regretted this lunch for months!

## Many volunteers

We worked hard and produced voluminous drawings, specifications and other construction necessities which enabled us to call tenders early in September and start work on the island early in December 1968.

When it became known a Caribbean project required the supervision of a Canadian Project Manager, most of the department volunteered!

We eventually selected Gilbert Holtz, a veteran of 26 years with Air Services architects, a recommendation in itself.

It became obvious shortly after Gilbert's departure from his Alma Mater on Ottawa's Lisgar Street in mid-November 1968, that he not only knew construction work well, but had missed his original calling to the "Corps Diplomatique".

On the site the first thing he discovered was that our concrete test cylinders had an

irresistible fascination as water containers that the local children could skilfully balance on their curly young heads. This meant that Gilbert had to improvise without them. The next great discovery was that the local stone crushing machines were out of action. However, there were plenty of local volunteers, no doubt inspired by his enthusiasm, to crush tons and tons of rock with little hammers in a temperature in the 90's.

At one point it was suggested that the work would proceed at a brisker pace if the concrete could be transported in wheelbarrows instead of buckets and headpans. However, this met with opposition from the workers on the grounds that the wet concrete would dirty the new wheelbarrows.

## Intelligent and thrifty

We found the local labour to be intelligent, good natured, thrifty and nice to work with, and they served us well. Air shipment of materials was costly and the sea shipments seemed to have been routed via our last job in Ceylon.

We are still looking for the keen yachtsman off Barbados who borrowed our aluminum flagpoles, perhaps to serve as masts.

*(continued on page 15)*



## *Providing better navigation aids as volume of air traffic grows*

by A. Victor Bushe  
*Information Services Division*

It was a beautiful May morning when the equipment filled Department of Transport DC-3 took off from Ottawa International Airport for one of the three-times-a-year flight checking routines of the Instrument Landing System at the airport. The previous routine flight check at Ottawa had been carried out in January in sub-zero temperatures, but this time conditions were ideal for the exercise.

A flight check of the Instrument Landing System (ILS) is carried out by the Civil Aviation and Telecommunications and Electronics Branches of the department. To the uninformed observer this would seem a dull and uninteresting task, but to the pilots and technicians involved it is a vitally important service they are performing—one that could save the lives of many people.

Throughout the operation there was never the slightest indication that the pilots and technicians could be bored with their duties. Instead an unusual enthusiasm was evident, especially when the flight check procedures were working smoothly to relate that the ILS system was efficient.

The May flight check at Ottawa took approximately seven hours. During that time the DC-3 was flying almost continuously and had to make its numerous approaches to the runway between the schedule landings and takeoffs of other aircraft.

### **Three types of checks**

There are three types of flight checks carried out by DOT pilots and technicians. They are commissioning flight checks following installation of navigation or approach aids; special flight checks when an

aircraft accident involves these aids, and periodic flight checks. On this occasion it was a periodic flight checking routine—one that is carried out every four months wherever ILS installations are in operation.

The DC-3, which came from the Toronto Region for the flight check, is one of the DOT aircraft specially fitted for calibration purposes. It is filled with electronic equipment calibrated to very close tolerances and has special recording instruments for the calibration of the Instrument Landing Systems.

At the controls of the aircraft was George Lloyd, a flight inspector from the Toronto Region, with Don Gibson as his co-pilot. In charge of the flight calibrations in the aircraft was specialist Doug Walker, who was in contact throughout the operation with E. L. "Corky" Clark, operating the ground instruments.

The pilots are with the Airways Division in Toronto, and flight calibration specialists, Doug Walker and "Corky" Clark, with the Maintenance and Operations Division of the Telecommunications and Electronics Branch.

### **Important Role**

An important role is played at Ottawa Airport, and the other airports which have ILS, by the department's telecommunications experts whose job it is to operate and maintain the Instrument Landing Systems.

In Canada, the Department of Transport is responsible for establishing and maintaining the airway and airport facilities, and for this it has to provide and maintain the big array of electronic gadgetry required for the task.

Radio aids are part of the requirements of air navigation in all types of weather, and in order to give maximum benefit to the increasing volume of air traffic, the department's radio facilities must be reliable and as accurate as possible at all times.



D.O.T DC-3

Since signals received in the air are not always consistent with what would be expected from ground measurements, it is necessary to carry out verifying flights at regular intervals. The Instrument Landing System is one of these navigation aids which require periodic checking.

The Instrument Landing System provides the information needed by the pilot to approach the runway and land in conditions of low cloud and poor visibility. It consists of four transmitters.

The localizer transmitter actuates an instrument in the aircraft which shows whether it is flying left or right of, or on, the projected centre line of the runway. During the flight check the centre line signal is measured, by using a theodolite on the ground and recording oscillograph in the flight check aircraft, to one hundredth of a degree both for alignment and approach path width. It is then adjusted to be within one-tenth of a degree of perfection. Should there subsequently be a significant change in the signals from the values established during the flight check, the associated monitoring system will initiate an alarm and turn the transmitter off. This warns maintenance personnel that corrective action is required.

### **Ideal approach angle**

The glide path transmitter provides a signal which enables the aircraft to be guided down to the runway at an ideal approach angle. This transmission is also measured for angle and width and adjusted and maintained to the similar fine tolerances. The aircraft instrument warns the pilot when the aircraft deviates from the correct path, and indicates what change should be made to regain the path.

The outer and middle marker transmitter warn the pilot of the exact distance to the runway at two points during the last part of the approach. The outer marker signal

*(continued on page 15)*

tells the pilot his distance from the runway soon after the final descent begins, and permits a check of the function of the two guiding transmissions. The middle marker signals that the aircraft has reached the decision point on the approach. The aircraft must be at the correct position and speed at this point to carry out a safe landing.

#### **Approach Lights**

During the May ILS flight check at Ottawa, an electrical technician joined the test crew for the earlier part of the operation to check the airport's approach lights. The approach lights are an important part of the instrument approach system as they provide the pilot with a view of the ground so that he may know that the landing strip

is ahead of him, that he is lined up with it and that the attitude of his aircraft is correct.

As flight inspector, in addition to being pilot of the flight check aircraft, George Lloyd had to prepare the flight check charts and maps and ensure that the checks were carried out in accordance with the latest instructions. Throughout the operation he was in constant communication with the flight check technician to determine the acceptability of the facility.

#### **Award contract for new systems**

A contract amounting to \$3.9 million was awarded in June by the federal Department of Transport to Philips Electronic Industries Limited of Toronto for 29 instrument land-

ing systems for Canadian airports.

The 29 installations were purchased as a part of a continuing program to improve the safety and efficiency of aircraft approach and landing operations at airports. The department now has ILS equipment installed at 43 airports and the new ones will be put into service during the next five years.

Each system provides both vertical and horizontal guidance to pilots approaching the runway and is particularly valuable during conditions of poor visibility. The new equipment is of fully solid state design and surpasses the requirements of the International Civil Aviation Organization.

Delivery of the first unit is expected in April, 1971.

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## **Montserrat project**

*(Continued from page 13)*

However, we and Anchor Construction Ltd. of Fredericton, N.B., our Canadian prime contractor, with the assistance of the Public Works Department of Montserrat, managed to open the new air terminal for operation on August 11 and to hold an official opening ceremony on August 20.

Before a gaily-dressed crowd of about 3,000, the new \$350,000 jointly-financed air terminal facilities at Blackburne Airfield were opened by the Canadian High Commissioner from Port of Spain, G. A. Rau, assisted by Lady Field, wife of the acting Administrator. The Department of Transport was represented by John Brown, the Chief Architect.

It was a happy occasion as the principal air carrier on the island, the Leeward Islands Air Transport, announced a 200 per cent increase in flights for the coming winter season, and Seagreen, the Antigua based and Canadian-owned cargo and charter flights company, revealed that they were negotiating with Montserrat for a passenger service franchise.

The opening ceremony would have touched any Canadian heart, as the people kept coming and shaking us by the hand and saying those two important little words "thank you".

For me, this made it worth the many working weekends, and the three-shirts-a-day routine while on the site.

The total effort of so many people could be best summarized in the words of Montserrat's Chief Minister, W. H. Bramble, J.P., in his opening ceremony address. He said that the project was "the result of collaboration between a continent and a little island, and bears evidence to the wonderful things that can happen when a lion lies down with a lamb".

It was an experience long to be remembered.

We are now busy in other parts of the Leeward Islands, extending runways, building aircraft aprons and taxiways and even diverting a river. Don Boyd is project manager in Antigua and Jim Clark in St. Lucia. We are currently waiting for tenders to start work in Dominica.

*(suite de la page 12)*

Au Bureau central d'analyse (BCA) à Montréal, les cartes sont imprimées automatiquement par une ingénieuse machine reliée à un ordinateur auquel on a fourni les données de base. On prévoit qu'un plus grand nombre de cartes seront, à l'avenir, établies de cette façon. Les cartes météorologiques terminées conviennent admirablement pour la transmission par facsimilé d'un bout à l'autre du Canada. Les cartes analysées au BCA, à Montréal, peuvent être disponibles simultanément dans tout le pays, ce qui économise de nombreuses heures-homme de travail ardu qui seraient nécessaires si chaque bureau météorologique était obligé de pointer et d'analyser ses propres cartes.

Des photographies nous parvenant de l'espace et transmises par des satellites météorologiques nous donnent aujourd'hui un nouveau type de carte qui, dans un certain sens, fournit une représentation imagée totale de la surface de la terre, vue de l'espace. Même après près de quatre cents ans de progrès, l'histoire de la carte météorologique est encore sans doute loin d'être terminée.



# Petit à petit, on se rend maître des glaces

De nouvelles méthodes améliorées introduites dans la lutte contre les glaces ont permis au chenal maritime du Saint-Laurent de demeurer ouvert, l'an dernier, pendant presque toute la durée de l'hiver. La lutte n'a tout de même pas été facile... et rien ne laisse prévoir qu'elle deviendra de sitôt une sinécure.

Au cours de l'hiver dernier, on a eu de difficiles embâcles à briser, mais tout de même rien de semblable aux murs de glace qui, l'année précédente, avaient provoqué des inondations causant de lourds dégâts la long du fleuve, particulièrement dans la région de Sorel.

Les succès remportés l'an dernier sont certes dûs en grande partie à l'effort soutenu des brise-glaces de la Garde côtière canadienne. A cela s'ajoute évidemment l'excellent rôle joué par les officiers de la Garde côtière qui, durant la saison des glaces, agissent comme pilotes spécialisés pour diriger la navigation dans le chenal dépourvu de bouées et d'autres aides essentielles. Le *N.B McLean*, le *Montcalm*, le *Wolfe* et le *Ernest Lapointe* sont en effet demeurés sur un pied d'alerte pendant toute la saison des glaces, l'an dernier, et ont lutté d'arrachepied, sept jours par semaine, pour prévenir les embâcles. En certaines occasions, on a fait appel également au *d'Iberville* qui a surtout œuvré dans la section plus profonde du fleuve entre Sorel et Lanoraie. Ce navire, à cause de ses dimensions et de son poids, ne peut manœuvrer avec aise en eau peu profonde et dans un chenal trop étroit.

Une innovation dans les services, ces dernières années, a aussi contribué énormément au succès du déglacage. Au cours de l'hiver 1967-1968, on a en effet réussi à utiliser les brise-glaces même quand la visibilité dans la voie navigable était à peu près nulle, à cause de tempêtes ou de la brume. Ceci a été possible grâce à la mise au point d'un nouveau système de radiopérage qui s'est révélé particulièrement efficace dans les travaux de déglacage du lac Saint-Pierre, par exemple.

A l'essai seulement à cette époque, ce système de radiopérage a subi depuis certaines transformations importantes, et il sera soumis, cette année, à de nouveaux tests dans des conditions encore plus difficiles. Si ces essais donnent les résultats espérés, le système pourrait être utilisé en permanence, devenant ainsi un outil précieux dans la lutte contre les farouches éléments de la nature.



**LA GLACE S'ENTASSE ET RÉSISTE**—La glace ainsi entassée peut atteindre parfois une profondeur allant de 35 à 40 pieds. Il y a quelques années, il a fallu faire appel au brise-glaces le plus lourd de la flotte, le *John A. Macdonald*, pour aider à briser l'embâcle aux approches du pont de Québec.

Le système de radiopérage prévoit actuellement l'installation de trois stations radio, dont deux sont situées à des points stratégiques le long de la rive et la troisième est à bord du navire. Les signaux émis par les stations riveraines sont captés à bord du brise-glaces, permettant ainsi au navigateur de déterminer sa position exacte et d'établir la course à suivre à l'aide de graphiques illustrant la trajectoire du navire. Grâce enfin à un système de radio-communication de bord hautement perfectionné, les navires peuvent ainsi avancer en formation dans les amoncellements de glace et s'attaquer aux embâcles sans crainte de se nuire mutuellement dans leurs travaux.

## Des estacades retiennent les glaces

La construction d'estacades et d'îles ar-

**FORMIDABLE TASK**—Ice piles up as the *John A. Macdonald* makes her way down the St. Lawrence near Quebec. Last season icebreaking operations began in late December 1968 and ended in mid-April 1969.

tificielles pour retenir les glaces à certains endroits dans le fleuve, particulièrement dans le lac Saint-Pierre, a également contribué sensiblement à prévenir les embâcles qui ont tendance à prendre forme rapidement dans cette section du fleuve où le courant est très lent. Ces estacades empêchent la glace côtière de dériver dans le chenal lorsqu'elle est détachée sous l'action du vent, de la marée résiduelle ou des vagues des navires.

Ces estacades, ancrées dans le lit du fleuve, sont faites de poutres flottantes reliées par des câbles d'acier. En plus de retenir les glaces susceptibles de créer des embâcles, elles rétrécissent nécessairement la largeur du chenal, permettant ainsi d'accroître la vitesse du courant qui emporte ainsi plus rapidement la glace flottante délogée par les brise-glaces.

Ces installations se sont révélées fort utiles au cours des deux dernières saisons. Aussi, cette année, a-t-on décidé d'ériger des estacades semblables à la sortie du «chenal du nord» à proximité de Lavaltrie, et ceci, en vue d'empêcher la glace de cette voie, fermée à la navigation d'hiver, de dériver dans le chenal principal. Il y a quelques années, la glace accumulée dans le «chenal du nord» a soudain cédé pour envahir la voie navigable et former des embâcles qui ont menacé de provoquer des inondations graves à divers endroits le long du fleuve.

Ces méthodes nouvelles ainsi que d'autres sur le point d'être introduites dans le contrôle des glaces sont le résultat d'intenses recherches initiées depuis plusieurs années déjà au ministère des Transports. D'autres services du gouvernement, dont, entre autres, le ministère de l'Énergie, des Mines et des Ressources et le Conseil national de recherches, nos universités et l'entreprise privée apportent également une importante contribution aux recherches dans ce domaine.

L'étude du comportement des glaces dans les eaux navigables du pays est devenue un sujet d'actualité retenant l'attention du monde entier. Cette préoccupation nous a paru particulièrement évidente, en septembre dernier par exemple, lorsque le *Manhattan*, énorme pétrolier américain, s'est frayé une voie dans les glaces du passage du Nord-Ouest.

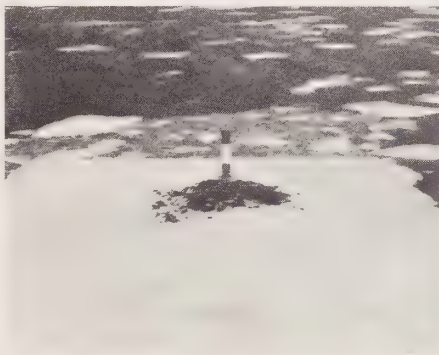
Autre preuve de l'intérêt qu'on porte au problème: L'an dernier, une quinzaine de spécialistes des glaces, répondant à l'invitation du chef de la Division du chenal du Saint-Laurent, M. William P. O'Malley, se sont réunis pour une séance d'étude à bord du brise-glace *d'Iberville*. Leurs discussions alors ont porté surtout sur les méthodes employées pour briser la glace ainsi que sur les moyens de disposer de cette glace après le bris, particulièrement dans les sections du fleuve où le courant n'est pas assez rapide pour emporter la glace broyée sous le poids des navires. Puis, ce groupe, composé de représentants de divers ministères et de certaines universités, a pu assister, depuis le pont du navire, à des opérations de déglacage dirigées par le *d'Iberville* qui s'est attaqué à un embâcle aux environs de Sorel. Selon M. O'Malley, d'autres réunions du genre auront lieu au cours de cet hiver.

Dans le fleuve Saint-Laurent, les plus graves embâcles se produisent dans la section s'étendant entre Montréal et Trois-Rivières. Le courant dans le lac Saint-Pierre, par exemple, est particulièrement lent et, quand surviennent des vents contraires, la glace flottante est littéralement arrêtée. Si le mercure plonge alors sous zéro et qu'une tempête sévit, la glace s'entasse rapidement et l'embâcle ainsi créé peut s'étendre jusque dans le port de Montréal, aux abords du pont Jacques Cartier... Dans le port, la



ILS PASSENT À L'ATTAQUE—Trois brise-glace de la Garde côtière, le *John A. Macdonald*, le *d'Iberville* et le *J. E. Bernier* foncent dans un champ de glace aux environs de Québec.

GOING INTO ACTION—The *John A. Macdonald*, the *d'Iberville* and the *J. E. Bernier* making a pathway through the ice in the St. Lawrence near Quebec.



ILES ARTIFICIELLES—Pour empêcher la glace de dériver dans le chenal maritime, on a aménagé à divers endroits de petites îles artificielles qui, comme l'illustre la photo, retiennent des masses de glace susceptibles de créer des embâcles.



DES ESTACADES AUSSI—Le contrôle des glaces, particulièrement dans le lac Saint-Pierre, s'exerce également à l'aide de ces estacades qui retiennent la glace côtière. Ces estacades, ancrées dans le lit du fleuve, sont faites d'immenses poutres flottantes reliées par des câbles d'acier.

VALUABLE AIDS—Great assistance in icebreaking operations has been given by the installation of ice abatement works on Lake St. Peter. These consist of experimental ice booms and artificial islands seen in these pictures.

glace parfois s'entasse jusqu'à une profondeur de 35 à 40 pieds, atteignant même le lit du fleuve.

### Besogne de tous les jours

Comme on peut donc le constater, le comportement des glaces dans le Saint-Laurent, comme d'ailleurs dans les autres voies navigables au pays, est constamment sous surveillance. A cette fin, on a recours à la photographie aérienne et l'on s'adonne également à diverses expertises sur place, dans les champs de glace, ainsi qu'en laboratoire.

Les hélicoptères de la Garde côtière y jouent aussi un rôle de premier plan. On s'en sert, entre autres, pour la reconnaissance des glaces ainsi que pour le transport du personnel et de l'outillage nécessaires

pour prélever les données scientifiques requises pour assurer la bonne marche des travaux de déglacage.

On étudie même actuellement la possibilité de mettre en service des aéroglisseurs qui, par mauvais temps par exemple, pourraient sans doute accomplir des tâches qui sont présentement interdites aux hélicoptères.

Dans le golfe et le chenal maritime du Saint-Laurent, la lutte contre les glaces débute habituellement en décembre pour ne prendre fin qu'en avril. C'est une tâche énorme, coûteuse sans doute, difficile à accomplir, mais essentielle tout de même si l'on veut garder les voies ouvertes au commerce maritime et prévenir aussi les désastreuses inondations auxquelles sont exposées les terres basses longeant le fleuve.



# Like giant birthday cake



## Island plays vital role in air traffic control

by Arnold Maybee TSM,  
*Port Hardy*

If you have a map of the west coast of British Columbia handy, look at the inland waterway between Vancouver Island and the mainland. Trace this waterway northwest from Vancouver, through the Gulf of Georgia and Johnston Straights, through Broughton Straits to the junction of Broughton Straits and Queen Charlotte Straits. Here you will find Malcolm Island some 200 miles northwest of Vancouver.

Malcolm Island is but one of many islands in this stretch of water but a very important one for aircraft flying the coastal route to Alaska and the north coast of British Columbia, or the great circle route to the Orient. The island is the home of Malcolm VOR, and after further study of airways maps of the west coast you will realize it is the only very high frequency omnirange between Sandspit on the Queen Charlotte Islands and Vancouver—480 miles to the south-east. Traffic is becoming so congested on this route that the Department of Transport is considering an alternate route on the west coast of Vancouver Island.

Malcolm Island has a unique and historical past. At the turn of the century Finnish immigrants, working in the coal fields in the Nanaimo area, became dissatisfied with working conditions and low pay and decided to better their lives by establishing a colony on Malcolm Island. Initially it was to be a communal settlement, but the village of Sointula did not live up to its name, which translated means harmony.

Almost from the first the colony was beset by unbelievable hardship, poverty, and errors of judgment. Finally disagreements among its members shattered the communal dream. The Finns are a hardy determined race and though the communal



**ROUGH BAY, BUT CALM HERE**—Rough Bay in Malcolm Island is the mooring for many fish boats.

**ROUGH BAY À MALCOLM**—La baie Rough sur l'île Malcolm sert de mouillage à de nombreux bateaux de pêche.



**ISLAND'S CO-OP STORE**—Sointula Co-operative Association store, founded in 1909, is the oldest consumers' co-operative in the province.

**LA COOPÉRATIVE DE SOINTULA**—La coopérative de consommation de Sointula, dans l'île Malcolm, est la plus ancienne coopérative de la Colombie-Britannique. Elle a été fondée en 1909.

system ended in failure the settlers persisted and Sointula is a thriving community today. It can boast that the major commercial enterprise, the Co-op store, founded in 1909 is the oldest consumers' co-operative in the province.

### Vigour and courage

The population of Malcolm Island is still predominantly Finnish. They are mainly engaged in fishing and have the vigour and courage this calling demands. Their vessels are kept in tip-top condition and their homes, though modest, are well kept. Looking at the history of the colony and meeting these people today gives one an insight into why their homeland has remained a bastion of freedom.

Malcolm VOR is a Doppler VOR. There are few of this type in Canada and I believe Malcolm VOR was one of the first. A standard type VOR was tried but did not prove successful because of adjacent mountains and long, narrow, fiordlike channels and straits. The Doppler type was reputed more reliable in difficult terrain and has proven so in this instance. While it has this advantage it has also some disadvantages, at least from the standpoint of an electronics technician. It requires twice as much complicated equipment to achieve the desired results.

The first impression of a visitor to the site is that he has come upon a giant birthday cake—44 feet in diameter! Not only is the "cake" immense but someone forgot to stop counting at 39 years and placed 51 huge red candles on the top. In reality the

51 candles are 51 alford loop antennas with their red plastic domes. The building is painted in the typical red and white check-board design, which adds to the illusion.

The effect is startling for anyone who is familiar with the standard VOR which has but four such antennas or only one of the cylindrical slotted type. If the visitor is a technician who has had to clean wet snow and ice from only four antenna domes he might even be depressed. Imagine 51 domes to be cleared of wet snow and ice!

### Standard VOR

It is not possible to give a detailed description in this article. Of interest to the electronics technician is the fact that in a standard VOR one transmitter, from a single exciter crystal, will produce a carrier and a sub-carrier frequency 9,960 cycles apart. If the carrier frequency varies a few cycles up or down the sub-carrier will follow, but the 9,960 cycle difference will not vary. In the Doppler system two transmitters are used and the crystals are matched, hopefully to be 9,960 cycles apart.

Since any transmitter will vary a little in frequency, an automatic frequency control unit samples the frequency of both transmitters and varies the frequency of the sideband transmitter until it is exactly 9,960 cycles above the carrier transmitter. A deviation monitor measures the difference in frequency and alarms if the deviation from the 9,960 difference is outside certain tight limits. If the limits are exceeded the equipment is shut down and the standby equipment goes into service.

In the Doppler system the normal single course monitor and portable detector cannot be used. Three fixed course monitors are used, on the 90, 210 and 330 degree radials. This is one disadvantage from the technician's point of view. Monitors are cantankerous pieces of equipment at the best of times and the bane of a technician's life. The Doppler VOR system provides three monitor antennas instead of just one as roosting places for birds. As any technician will tell you, seagulls have put more VORs off the air than voltage fluctuations! Technicians are sometimes doubtful if this is outweighed by the advantage of not having to compute two and four cycle errors or to move the portable field detector around the circle in cold weather.

To get to Malcolm VOR one has to cross about five miles of water in a small ferry or a 25 foot water-taxi. In good weather it is a pleasant trip. In stormy weather it can be quite uncomfortable. Perhaps you are a pilot who is flying V317 airways on a stormy night listening to the identification MH of Malcolm VOR and perhaps you have heard the Port Hardy Area Radio weather broadcast, which advised that the wind is blowing 25 or 30 miles per hour, gusting to 45. Suddenly there is a momentary interruption as the main equipment fails and the standby equipment comes on. Such an interruption can be annoying.

Before you become too annoyed on such an occasion give a thought to the technician who is bouncing over the waves to investigate the trouble and correct it. Sometimes he travels with more than his heart in his mouth.



# Un radiophare unique en son genre sur une île peu connue du Pacifique

par Arnold Maybee, TSM,  
Port Hardy

L'île Malcolm se trouve à quelque 200 milles au nord-ouest de Vancouver, dans la voie d'eau qui s'étend entre l'île de Vancouver et le continent, sur la côte occidentale de la Colombie-Britannique. Elle constitue en quelque sorte le point de rencontre des détroits de Broughton et de la Reine-Charlotte.

L'île fait partie de tout un archipel. Cependant, elle revêt une très grande importance pour les avions qui suivent la route du littoral vers l'Alaska, qui volent dans le nord de la Colombie-Britannique ou qui se rendent en Orient. En effet, l'île Malcolm abrite un radiophare omnidirectionnel VHF, le seul dans toute cette vaste région qui s'étend entre Sandspit dans les îles de la Reine-Charlotte et Vancouver, à 480 milles au sud-est. Or, la circulation aérienne sur cette route est devenue si encombrée que le ministère des Transports envisage actuellement l'ouverture d'une autre route passant par la côte occidentale de l'île de Vancouver.

L'histoire de l'île Malcolm est pleine de courage et de détermination. Vers le début du siècle, des immigrants finlandais, mécontents des salaires et des conditions de travail dans les mines de charbon de la région de Nanaïmo, avaient décidé de créer une colonie dans l'île Malcolm. À l'origine, il s'agissait d'exploiter la colonie en commun, mais la vie dans le village de Sointula (signifiant «harmonie») ne devait pas se révéler trop harmonieuse.

Dès ses premiers jours, la colonie fut accablée par le sort; elle vivait dans la misère et, ce qui n'arrangeait rien, on y commettait des erreurs de jugement. Enfin, la communauté finit par se désagréger par suite de querelles internes. Mais il fallait compter sur la ténacité qui caractérise les Finlandais. La communauté rompue, chacun persista, travaillant pour soi. Aujourd'hui, Sointula est florissante. Elle peut se vanter d'avoir la plus ancienne coopéra-

tive de consommation de toute la province. Fondée en 1909, elle constitue aujourd'hui la plus grande entreprise commerciale de l'île.

La population de l'île Malcolm est aujourd'hui encore finlandaise dans sa grande majorité. Les habitants vivent principalement de pêche et ont l'énergie et le courage que ce métier exige. Les navires sont toujours gardés en excellent état et les maisons, bien que modestes, sont toutes bien tenues. La petite histoire de cette colonie illustre bien pourquoi la Finlande est demeurée un bastion de la liberté.

## Le radiophare de Malcolm

Le radiophare de Malcolm est à effet Doppler. Ce type est peu commun au Canada. Le radiophare de Malcolm a vraisemblablement été l'un des premiers de ce genre au pays. Un radiophare ordinaire avait été essayé à Malcolm, mais les résultats n'avaient pas été concluants, à cause des montagnes adjacentes et des canaux et détroits, découpés en fjords, de la région. La radiophare à effet Doppler était considéré comme plus fiable en terrain accidenté et cela s'est révélé juste dans le cas de l'île Malcolm. Ce radiophare présente toutefois quelques inconvénients, du moins pour un technicien en électronique. C'est qu'il utilise deux fois plus d'équipement complexe qu'un radiophare ordinaire.

Le visiteur qui voit le radiophare pour la première fois a l'impression de se trouver devant un énorme gâteau d'anniversaire de 44 pieds de diamètre. L'impression est renforcée par 51 «chandelles» rouges de dimensions imposantes placées au sommet de l'ouvrage (qui n'a pourtant que 39 ans!). Il s'agit en fait de 51 antennes Alford à cadre avec leurs dômes de plastique rouge. La peinture en damier rouge et blanc ajoute à l'illusion.

L'effet est saisissant pour une personne qui connaît les radiophares ordinaires à quatre antennes à cadre et une antenne cylindrique à fentes. Si le visiteur est un technicien de radiophare, qui connaît déjà le problème de l'enlèvement de la neige molle et de la glace qui se forment sur le dôme de quatre antennes seulement, l'effet peut même être déprimant. Imaginez la tâche de débayer 51 dômes!

## Le travail du radiophare

Une description détaillée des appareils n'entre pas dans le cadre de cet article. Nous nous bornerons donc à dire, à l'intention des techniciens en électronique, que le radiophare omnidirectionnel VHF ordinaire comprend un seul émetteur qui, à partir d'un seul oscillateur à cristal, produit une porteuse et une sous-porteuse distantes de 9,960 Hz. Si la fréquence porteuse varie de quelques Hz, la sous-porteuse suit la même variation et l'écart de 9,960 Hz demeure constant. Dans le système à effet Doppler, deux émetteurs sont utilisés. Les cristaux sont réglés de telle sorte que l'écart de fréquence soit de 9,960 Hz. Cependant, la fréquence de n'importe quel émetteur varie quelque peu. On a donc besoin d'une unité de contrôle automatique de fréquence qui, continuellement, échantillonne la fréquence des deux émetteurs et agit sur l'émetteur de bande latérale pour le maintenir à 9,960 Hz au-dessus de la fréquence porteuse. Un contrôleur de déviation mesure l'écart en question et actionne un dispositif d'alarme si certaines limites, très proches de 9,960 Hz, sont dépassées. Dans ce cas, l'équipement principal est débranché et l'équipement de secours est mis en marche.

Pour atteindre le radiophare de Malcolm, il faut traverser un bras de mer de cinq milles sur un petit traversier ou un hydro-taxi de 25 pieds de long. En temps clair, le voyage est agréable, mais si le temps est à l'orage, la traversée est assez pénible.

Peut-être êtes-vous pilote sur les voies aériennes V317. Il vous est sans doute arrivé, par une nuit d'orage, d'écouter le signal d'identification MH du radiophare de Malcolm, après avoir entendu la météo de Port Hardy annoncer des vents de 25 à 30 milles à l'heure, atteignant 45 milles à l'heure. Tout à coup, le radiophare cesse d'émettre pendant quelque temps, lorsque, l'équipement principal ayant failli, les appareils de secours sont mis en marche. Une telle interruption peut être assez embarrassante, mais avant de vous mettre en colère et de pester contre les responsables, pensez un instant au pauvre technicien, ballotté par une mer démontée et atteint parfois du mal de mer, qui va chercher la panne et effectuer les réparations nécessaires.

NO LONGER 'MEN ONLY'—The CCGS *Quadra* proceeding to her berth in Esquimalt Harbour. Inset—Lady oceanographers Lise Boilard, left, et Jane Huyer.

Océanographie «MIXTE»—Le NGCC *Quadra* se dirigeant vers son mouillage à Esquimalt Harbour. En médaillon, on voit les deux femmes océanographes, de gauche à droite, Lise Boilard et Jane Huyer.



## "IF YOU CAN'T BEAT 'EM, JOIN 'EM"

The Canadian Coast Guard fleet based at Victoria has set a record by having lady oceanographers on board for a weathership patrol. Once more females have proven their ability to compete with men and retain their femininity!

The women, Jane Huyer of Barrie, Ontario, and Lise Boilard of Quebec City, are on the staff at Marine Sciences Branch, Ottawa, and were temporarily attached to the Pacific Oceanographic Group, Nanaimo.

It wasn't until three weeks prior to the *Quadra* leaving for Station "Papa" that Lise knew definitely she would be going. While out on station she managed to catch three salmon (with a little help).

Lise and Jane worked together in Ottawa and were friends before this patrol. They were in very good spirits on their return and it was evident their friendship had not suffered even after seven weeks of living in close quarters.

While Jane had spent three days on the St. Lawrence, neither girl had been out to the open sea before. On the first day they were sea sick for a half day. After that, they were just too busy performing their numerous tasks to be ill.

Meals were eaten in the officers' mess, and slacks were their "uniform". Both agreed that seven weeks was a long time, and perhaps five or six weeks would have been long enough. Jane would not mind going back to the Station "Papa" if she

had a specific interest, although at the moment her interest lies in the Arctic.

When asked if she would recommend other lady oceanographers to participate in this program, Jane expressed the opinion that she would recommend it only if the ladies were really interested and willing to work hard.

Jane is a graduate in physics from University of Toronto and joined the Marine Sciences Branch (DEMR) in Ottawa in 1967. While on the patrol on the CCGS *Quadra* she was responsible for various aspects of oceanographic work, including hydrographic bottle casts, salinity/temperature/depth systems, bathythermographs, expendable B.T.'s, satellite navigation and processing of data by computer on shipboard, as well as taking responsibility for one of the oceanographic watches.

Lise is truly bilingual. She is a graduate in mathematics from Laval University, Quebec, and joined the Marine Sciences Branch in Ottawa in 1968. She worked with Dr. T. S. Murty on mathematical modelling of a tsunami moving through Alberni Inlet and went to POG in May 1969, partly because of her interest in getting some sea work in oceanography and partly as a companion for Jane Huyer.

Lise's duties on the weathership were similar to Jane's, with more emphasis on the mathematical aspects (data processing and analysis on the Hewlett Packard 2115A computer).

Michael Waldichuk, Oceanographer in Charge, had these comments about lady oceanographers:

"While we tend to be bound by tradition that oceanography, and particularly sea-going oceanography, is man's domain, women are making serious inroads into the field. A recent visit by the Soviet Research Ship *Vityaz* showed the presence of a large proportion of the scientists to be lady oceanographers. Women are beginning to sneak into oceanography in many academic institutions in North America. My answer to this female encroachment on a 'man's empire' is, 'If you can't beat 'em, join 'em.'"

"We probably will not have female oceanographers regularly on the weatherships, but the present patrol of *Quadra* is certainly a major breakthrough in integrating the sexes in oceanography. It is certainly a "first" in Canada if not in the world for weathership patrols. We expect that it would be a fairly routine matter from now on."

Excerpt from Capt. A. A. R. Dykes' report on return to port:

"The two ladies, Misses J. Huyer and L. Boilard were hardworking members of the oceanographic team. These were the first women oceanographers carried on Station "Papa" vessels and it was a pleasure to have them on *Quadra*. There was a marked improvement in the use of language and the quality of stories in the mess!"



# «VAUT MIEUX S'EN FAIRE DES ALLIÉES»

La flotte de la Garde côtière canadienne à Victoria a établi un record en envoyant deux femmes océanographes à bord d'un navire météorologique... et, une fois de plus, la femme a ainsi prouvé qu'elle pouvait faire la concurrence à l'homme, tout en gardant sa féminité.

Les deux océanographes, Jane Huyer, de Barrie (Ont.) et Lise Boilard, de Québec, sont employées à la Direction des sciences de la marine, à Ottawa. Pour participer à la patrouille, elles ont été détachées auprès du groupe océanographique du Pacifique à Nanaimo.

C'est seulement trois semaines avant le départ du *Quadra* à destination de la station «Papa» que Lise Boilard sut avec certitude qu'elle ferait partie de la patrouille. Pendant une excursion de pêche à la station, elle a réussi à prendre trois saumons (avec un tout petit peu d'aide!).

Le séjour de Lise et Jane à la station «Papa» a été d'une durée de sept semaines.

Les deux jeunes filles n'avaient jamais voyagé en mer auparavant. Jane avait seulement navigué pendant trois jours sur le *Quadra* fut-elle assez pénible, mais le mal de mer ne persista que quelques heures. «Nous étions ensuite trop occupées pour avoir le temps d'être malades» disent-elles.

Les deux jeunes filles prenaient leurs repas au mess des officiers. Leur uniforme: le pantalon. Toutes deux sont d'avis qu'un voyage de sept semaines est passablement long. Cinq ou six semaines auraient suffi. Jane ne verrait pas d'inconvénients à retourner à la station «Papa», mais, pour le moment, elle s'intéresse plutôt à l'Arctique.

Deux autres océanographes se trouvaient à bord, M. C. A. Collins et M. DeJong,

«Nos collègues, disent les jeunes filles, nous ont réservé un accueil très cordial et nos relations de travail étaient excellentes.»

## «Il faut travailler dur»

À la question de savoir si elle encouragerait d'autres femmes océanographes à entreprendre le voyage, Jane répond qu'elle le ferait si ses collègues s'intéressent vraiment à la question et si «elles sont capables de travailler dur».

Licenciée en physique de l'Université de Toronto, Mlle Huyer est entrée à la Direction des sciences de la marine du ministère de l'Energie, des Mines et des Ressources en 1967. Pendant son séjour à bord du *Quadra*, elle était chargée de différents travaux d'océanographie, dont l'étude des courants maritimes, les systèmes salinité/température/profondeur, les observations bathythermographiques, la navigation par satellites et le traitement électronique des données sur l'ordinateur de bord. Jane devait également prendre l'un des quarts océanographiques.

Lise, parfaite bilingue, est une licenciée en mathématiques de l'Université Laval, à Québec. Elle est entrée à la Direction des sciences de la marine en 1968 et y a travaillé avec M. T. S. Murty à un modèle mathématique d'un tsunami se déplaçant à travers l'anse d'Alberni. Elle a demandé à faire partie du groupe océanographique du Pacifique en mai 1969 à cause de l'intérêt qu'elle porte au travail en mer et aussi pour accompagner son amie Jane Huyer.

Les fonctions de Lise étaient pratiquement les mêmes que celles de Jane sauf qu'elle s'occupait plus, à cause de sa formation, des aspects mathématiques (traitement et analyse des données sur un ordina-

teur Hewlett Packard 2115A).

## Place aux femmes

L'océanographe en chef Michael Waldichuk constate qu'on compte de plus en plus de femmes dans ce domaine de l'océanographie. «Bien que la tradition nous porte à réserver cette profession, surtout si elle comporte des missions en mer, aux hommes, dit-il, nous voyons de plus en plus de femmes y faire leur entrée. D'ailleurs, nous avons déjà remarqué, lors de la visite du navire océanographique soviétique *Vityaz*, la présence, parmi le personnel scientifique, d'un grand nombre de femmes. Les sections d'océanographie des universités nord-américaines comptent de plus en plus d'étudiantes. Devant cette invasion, ajoute M. Waldichuk avec un grand sourire, je pense que si l'adversaire devient trop fort, il vaut mieux s'en faire un allié.

«Il n'est pas encore question d'assigner régulièrement des femmes océanographes aux patrouilles météorologiques, a poursuivi M. Waldichuk, mais la mission du *Quadra* représente, nul doute, une brèche dans le mur des préjugés. C'était une "première" pour le Canada, sinon pour le monde, mais nous prévoyons que la chose deviendra courante à l'avenir.»

Extrait intéressant du rapport du capitaine A. A. R. Dyke, lors du retour au port:

«Les deux dames, Mlles J. Huyer et L. Boilard, faisaient un travail considérable au sein de l'équipe océanographique. Elles ont été les premières femmes océanographes à bord des navires de la station «Papa» et leur présence sur le *Quadra* nous a été très agréable. Au mess, on a noté, il va sans dire, une amélioration sensible au chapitre du langage tenu par le personnel de bord.»

# Combine Forces in water safety demonstrations

Have you ever thought of using a paper bag for saving a life, or an overturned metal water bucket or a rubber boat as a life preserver?

Use of such articles may seem silly, but for 500 people in Saint John, New Brunswick, the effectiveness of these ideas, and many others, was demonstrated on August 14 by four local lifeguards, three scuba divers and employees of the Department of Transport, the National Harbours Board, the New Brunswick Branch of the Canadian Red Cross and the Saint John Fire Department.

The first half of the demonstration consisted of personal survival methods such as the use of available material for floats, artificial respiration on and in the water, first aid for leg cramps and drown proofing. This work was carried out by trained life guards Tony Tobias, Clarence Forgraves, Allison Sprague and William Munroe. A floating work platform was provided by the NHB as a focal point for this part of the display.

Part two of the display consisted of rescue by ship and helicopter, and began with a display of search and rescue methods by a Saint John Fire Department squad of scuba divers, David Mabec, James Eastwood and Lester Le Blanc. The CCGS *Thomas Carleton* under command of chief Officer Bob Denton provided a landing pad for Hugh Tingley's helicopter, and this was probably the outstanding crowd pleaser of the afternoon. A close second in crowd interest was the demonstration of a self inflating life raft by Captain May and the crew of the CCGS *Robert J. Foulis*.

In addition to D.O.T. ships and boats, the Department of Public Works, the Department of Fisheries and the National Harbours Board had vessels on hand. Allan Dow operated a very interesting fiberglass boat for the Department of Transport.

Observers said the site chosen for demonstration could not have been better. On the waterfront at the D.O.T. base in downtown Saint John, the site was used through the co-operation of Capt. Guy Williams, District Manager, and provided a wharf inlet large enough to accommodate all the craft involved and provided spectator observation on three sides.



**WATER SAFETY**—A large crowd watched the water safety demonstration staged in Saint John harbor by the Department of Transport, and the National Harbours Board. Pictured here, from left: Dan Dibdin, DOT safety officer, of Ottawa; Lloyd McCumber, president of NHB federal union No. 24; Ralph Daley, secretary, Local 273, International Longshoremen's Association; Fred D. Hodges, president of the Saint John District Labor Council and Maurice Humphrey, president of Local 297, Canadian Brotherhood of Railway Transport and General Workers Union.

**SÉCURITÉ SUR L'EAU**—Une foule nombreuse à Saint-Jean, Nouveau-Brunswick, a assisté, l'été dernier, à une démonstration portant sur les moyens de prévenir les noyades. La démonstration avait été organisée conjointement par le ministère des Transports et le Conseil des ports nationaux. De gauche à droite dans la photo, on reconnaît MM. Dan Dibdin, d'Ottawa, préposé à la sécurité au ministère; Lloyd McCumber, président de la succursale 24 du syndicat des employés des ports nationaux; Ralph Daley, secrétaire de la succursale 273 de l'Association internationale des débardeurs; Fred D. Hodges, président du Conseil du travail de la région de Saint-Jean; et Maurice Humphrey, président de la succursale 297 de la Fraternité canadienne des cheminots, employés des transports et autres ouvriers.



**HISTORY OF MARINE SERVICES**—Transport Minister Don Jamieson, left, has a chat with the department's Marine Historian, Thomas E. Appleton, on receiving a copy of Mr. Appleton's book "Usque Ad Mare". Produced as a centennial project of the department, the book is a history of the marine services of Canada and traces development from the navigation of the earliest settlers, through the colonial and provincial period, to the activities of the Department of Marine and Fisheries and the administration of today.

**HISTORIQUE DES SERVICES DE LA MARINE**—Le ministre des Transports, l'honorable Don Jamieson, à gauche, s'entretient avec l'historien maritime du Ministère, M. Thomas E. Appleton, après avoir reçu un exemplaire du livre de ce dernier «Usque Ad Mare». Ce livre, édité par le ministère à l'occasion du centenaire, retrace l'histoire des services de la Marine du Canada et décrit l'évolution de la navigation depuis l'époque des premiers colons de l'ère coloniale et provinciale jusqu'aux activités du ministère de la Marine et des Pêcheries et de l'administration actuelle.





**GOOD WISHES OF ALL**—Here Mr. and Mrs. Saint-Laurent are seen with the certificate of good wishes presented at the reception on June 25. On left is R. J. D. Brown, Acting Chief of Purchases and Contracts Division, and G. C. Tilley, Senior Financial Advisor.

**MEILLEURS VOEUX**—M. et Mme Saint-Laurent, tenant le «certificat de meilleurs vœux» qui leur a été remis au cours de la réception. A gauche, MM. R. J. D. Brown, chef suppléant de la Division des achats et des contrats, et G. C. Tilley, conseiller financier ministériel.

## J. A. G. Saint-Laurent

J. A. G. (Gerard) Saint-Laurent, Chief, Purchases and Contracts Division of the department, retired on June 30 after more than 42 years of government service.

Mr. Saint-Laurent entered government service in 1927 as a clerk in the Quebec Canals Dredging Fleet of the Department of Railways and Canals.

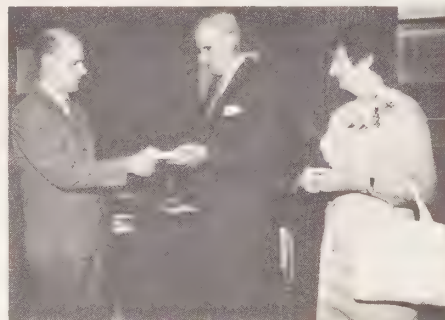
During the Second World War he gave distinguished service in supervising the placing of government stores on board ships. In April 1957, after many years of responsible experience in the operation and administration of the Purchases, Contracts and Stores Division of D.O.T., he was appointed its Chief.

## M. J.-A.-G. Saint-Laurent

M. J.-A.-Gérard Saint-Laurent, chef de la Division des achats et des contrats du Ministère, a pris sa retraite le 30 juin dernier, après plus de 42 ans de service dans la Fonction publique.

M. Saint-Laurent avait commencé en 1927 comme commis dans la flotte de dragage des canaux du Québec, au ministère des Chemins de fer et Canaux.

Pendant la Seconde guerre mondiale, il était responsable du chargement des approvisionnements gouvernementaux à bord des navires. En avril 1957, après avoir acquis, dans des postes de direction, une grande expérience de l'exploitation et de la gestion de la Division des achats, des contrats et des approvisionnements du ministère des Transports, M. Saint-Laurent en était nommé chef.



**FAREWELL GIFT**—Alain Paradis, Administrative Assistant, General, centre, being presented with a gift by Gilles Sicotte, Assistant Deputy Minister, General, to mark his retirement on August 31 after 22 years' service. Watching the presentation is Mrs. Paradis. The presentation took place at a reception held in Mr. Paradis' honour in the Hunter Building, Ottawa, on August 19.

**RETRAITE BIEN MÉRITÉE**—M. Alain Paradis, au centre, adjoint administratif à la direction générale du ministère, a pris sa retraite, le 31 août dernier, après 22 ans de loyaux services chez nous. Dans cette photo, on voit le sous-ministre adjoint à la direction générale, M. Gilles Sicotte, en train de faire une présentation à M. Paradis à l'occasion d'une fête intime en son honneur. Mme Paradis, à droite, accompagnait son mari à la fête.

## René L'Heureux

At a farewell dinner held on September 11, Dr. Pierre Camu, President of the St. Lawrence Seaway Authority, paid tribute to René L'Heureux, whose retirement from the Seaway marks the completion of over 35 years' service in the field of government transportation.

After graduating from the Ecole Polytechnique of the University of Montreal in 1930, Mr. L'Heureux held a number of engineering and senior management posts with the Quebec Department of Highways, the Federal Department of Transport and the Seaway Authority. Since 1967, Mr. L'Heureux has been special advisor to the Authority.



**FAREWELL DINNER**—Dr. Pierre Camu, President of the St. Lawrence Seaway Authority, at left, with Mr. René L'Heureux during the farewell dinner held on the occasion of Mr. L'Heureux's retirement from the St. Lawrence Seaway.

**DÎNER D'ADIEU**—M. Pierre Camu, président de l'Administration de la Voie maritime du Saint-Laurent, à gauche, avec M. René L'Heureux au cours du dîner d'adieu donné à l'occasion du départ à la retraite de M. L'Heureux.

## M. René L'Heureux

Le 11 septembre, M. Pierre Camu, président de l'Administration de la Voie maritime du Saint-Laurent, a rendu hommage lors d'un dîner d'adieu, à M. René L'Heureux qui prenait sa retraite au terme d'une carrière de 35 ans au service du gouvernement dans le domaine des transports.

Après des études à l'Ecole polytechnique de l'Université de Montréal dont il sortit diplômé en 1930, M. L'Heureux occupa plusieurs postes techniques et de direction au ministère de la Voirie du Québec, au ministère fédéral des Transports et à l'Administration de la Voie maritime. Depuis 1967, M. L'Heureux était conseiller spécial de l'Administration.

## Other retirements

Other retirements, giving date of retirement and years of service with the department: John Burgess, Halifax, N.S.—May 31—21 years

J. Bishop, St. John's Nfld.—July 2—10 years  
H. C. Carey, St. John's Nfld.—Nov. 18—16 years

F. C. Cornish, Kilworthy, Ont.—Sept. 12—32 years

Jacques Godin, Que.—Feb. 26, 1970—31 years

(continued next page)

# Receives coveted Tissandier Diploma

Andre O. Dumas, of Ottawa and Three Rivers, Immediate Past President of the Royal Canadian Flying Clubs Association has received the coveted Tissandier Diploma from the Federation Aeronautique Internationale in recognition of his efforts in developing private aviation in Canada. The presentation was made as the RCFCA wound up its 40th Anniversary Meeting at The Lakehead. Mr. Dumas is Chief of the Department's Airport Operations Review.

The citation on the Tissandier Diploma awarded to Mr. Dumas reads:

"Has actively promoted aviation in Canada for many years, having given unstintingly of his time and energies to aviation causes, namely the Air Cadet League of Canada of which he is Vice Chairman, and notably the Royal Canadian Flying Clubs Association of which he was President for two years. During his terms of office, Mr. Dumas introduced worthwhile incentives to flying training in Canada, including advanced flying training scholarships for substantial monetary sums."

## Retirements (cont'd)

W. E. Godkin, Morrisburg, Ont.—Sept. 15—7 years  
T. A. Haywood, Fort William, Ont.—Sept. 16—13 years  
S. E. Hill, Ottawa—Aug. 22—30 years  
J. P. Lavallee, Winnipeg—July 26—17 years  
L. Lamontagne, Que.—Oct. 8—40 years  
J. E. Lohnes, Bridgewater, N.S.—Nov. 23—10 years  
N. MacNeil, Cape Breton, N.S.—July 3—22 years  
Mrs. V. McCullough, Vancouver—July 29—7 years  
J. A. Mercier, St. Pierre de Montmagny, P.Q.—Aug. 8—17 years  
A. Mercier, Ste. Foy, Que.—July 21—37 years  
A. W. Park, Winnipeg—Aug. 5—18 years  
H. R. Peters, Digby, N.S.—July 7—8 years  
C. A. Popejoy, Weston, Ont.—Sept. 25—13 years  
W. E. Rea, Kirkfield, Ont.—July 25—18 years  
R. A. Reid, St. Catharines, Ont.—Sept. 28—10 years  
A. G. Stanley, Dartmouth, N.S.—Aug. 30—20 years  
A. Samson, Lac St. Charles, P.Q.—Aug. 28—29 years  
J. E. Tunstall, Victoria, —July 16—8 years  
F. S. Wilcox, Grand Manan, N.B.—Aug. 7—6 years



INTERNATIONAL AWARD—Andre Dumas, centre, of Ottawa and Three Rivers, shows his pleasure at being presented with the coveted Tissandier Diploma of the Federation Aeronautique Internationale for his outstanding contributions to the development of private aviation in Canada. With Mr. Dumas are W. Ross Macdonald, Lieutenant Governor of Ontario, who was in the Lakehead as the RCFCA's guest of honor to present the Governor General's Shield to the Association's top new pilot and R. P. Bob Purves, RCFCA President.

RÉCOMPENSE INTERNATIONALE—André Dumas, au centre, d'Ottawa et de Trois-Rivières, manifeste sa satisfaction alors qu'on lui remet le convoité diplôme Tissandier de la Fédération Aeronautique Internationale pour sa contribution exceptionnelle au développement de l'aviation privée au Canada. Autour de M. Dumas on voit W. Ross MacDonald, lieutenant-gouverneur de l'Ontario qui était à Lakehead l'invité d'honneur de la RCFCA chargé de remettre la plaque du gouverneur général au meilleur nouveau pilote de l'association et R. P. Bob Purves, président de la RCFCA.

## Remise du diplôme Tissandier

M. André O. Dumas, d'Ottawa et de Trois-Rivières qui fut président, immédiatement avant le président actuel, de la Royal Canadian Flying Clubs Association a reçu de la Fédération Aeronautique Internationale la distinction convoitée du diplôme Tissandier en reconnaissance de ses efforts en vue de la promotion de l'aviation privée au Canada. La remise a eu lieu au cours de la réunion marquant le 40e anniversaire de la RCFCA à Lakehead.

M. Dumas est le chef de la Révision de l'exploitation des aéroports du Ministère.

Le Diplôme Tissandier qui a été créé par M. Paul Tissandier, premier Directeur général de la FAI, est décerné à des personnes ayant particulièrement contribué à la cause de l'aviation dans leur pays en aidant à la compréhension internationale grâce à la promotion du pilotage.

Le diplôme Tissandier remis à M. Dumas comporte la citation suivante:

«A, pendant de nombreuses années, fait connaître l'aviation au Canada, donnant sans compter son temps et son énergie à la cause de l'aviation, étant le vice-président actuel de l'Air Cadet League of Canada et en particulier, ayant été pendant deux ans président de la Royal Canadian Flying Clubs Association. C'est au cours de cette période que M. Dumas lança une campagne d'encouragement au pilotage au Canada, y compris des bourses importantes de perfectionnement».

Parmi les autres éminentes personnalités de l'aéronautique canadienne déjà titulaires du diplôme Tissandier, citons le regretté G. R. «Grant» McConachie, ancien président de CP Air, Gordon R. McGregor, ancien président d'Air Canada et le Maréchal de l'Air Robert Leckie, président honoraire de la RCFCA.

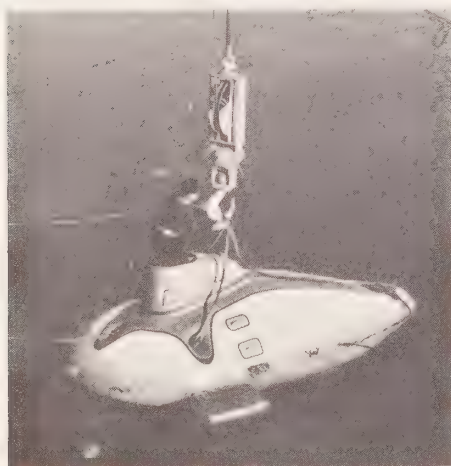


# TRANS CANADA

## "An impressive performance"

VICTORIA—H. O. Buchanan, RDMS (Western) was aboard the manned submersible when it located the tugboat *Emerald Straits*, which sank in Howe Sound on April 20 this year with the loss of three lives. The *Pisces I*, British Columbia developed undersea exploratory and recovery craft, has given a notable demonstration of its effectiveness. "It was an impressive performance", Mr. Buchanan said. "Just 15 minutes after leaving the surface, the *Pisces* had reached the sea bottom and located the tug with the aid of its sonar equipment."

VICTORIA—M. H. O. Buchanan, directeur des Services de la marine (région de l'Ouest) se trouvait à bord du submersible *Pisces I* lorsque celui-ci a localisé l'épave du remorqueur *Emerald Straits* qui avait coulé à Howe Sound, le 20 avril dernier, avec trois hommes à bord. Sous-marin d'exploration et de recherche construit en Colombie-Britannique, le *Pisces I* a ainsi donné une impressionnante démonstration de son efficacité. «L'opération s'est déroulée d'une façon extraordinairement simple, dit M. Buchanan. Quinze minutes après avoir quitté la surface, nous étions au fond et avions déjà localisé l'épave du remorqueur à l'aide du sonar de bord».



Pisces I



TOUR OF AIRCRAFT WORKS—Delegates from the department attended the Technical Conference of the Airport Operators Council International earlier this year. Here the delegates are on a walk-around inspection of Boeing's first giant 747. In the group are the following department delegates viewing the eight-foot diameter engine: From left, T. M. McGrath, Chief, Airport Services and Properties; D. L. Button, A/Superintendent, Aviation Systems Planning; D. C. McAree, Superintendent, Commercial and Public Services.

VISITE À LA BOEING—Une délégation du ministère des Transports à une conférence internationale sur les aéroports a eu l'occasion de visiter l'usine de la Boeing Aircraft, à Seattle, Washington. On voit ici le groupe photographié devant un Boeing 747 géant. De gauche à droite, on reconnaît: MM. T. M. McGrath, chef des services et des biens des aéroports; D. L. Button, du service des recherches et de la planification; et D. C. McAree, des services publics et commerciaux.

## Research meteorologist gets Patterson Medal

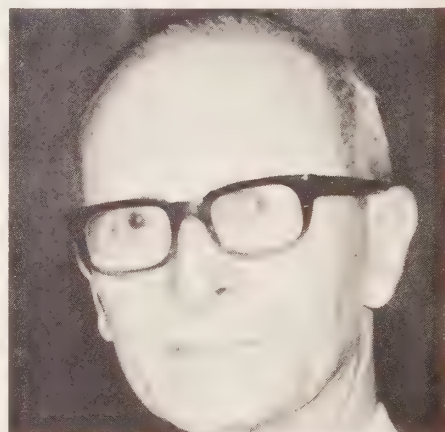
TORONTO—Dr. Warren L. Godson, Superintendent of Research in the Research and Training Division of the Department of Transport's Meteorological Branch, earlier this year received the Patterson Medal for 1968.

The Patterson Medal struck by the Canadian Mint, features a likeness of Dr. John Patterson, Controller of the Meteorological Service of Canada from 1929 to 1946, and is awarded annually to a resident of Canada, who, in the opinion of the award committee has rendered distinguished service to meteorology, either over a period of time or through a recent outstanding achievement.

## La médaille Patterson décernée à M. W. L. Godson

TORONTO—M. Warren L. Godson, surintendant à la Division de la recherche et de la formation de la Direction de la Météorologie, a remporté la médaille Patterson pour 1968.

M. Godson, docteur ès sciences, est un chercheur météorologiste prolifique: il est l'auteur de plus de 100 articles portant sur une vaste gamme de sujets dans les domaines physique, synoptique et dynamique.



Dr. W. L. Godson

**ÉTUDIANTS ALGÉRIENS À OTTAWA**—Le ministère des Transports a accueilli récemment un groupe de diplômés de l'École nationale d'administration d'Algérie. Ces étudiants sont venus chez nous afin de se renseigner sur les techniques modernes de gestion dans les services du ministère. Dans la photo du haut, on voit une partie des quelques 40 étudiants prenant part à la séance d'étude. A droite, le sous-ministre adjoint à la Direction générale, M. Gilles Sicotte, fait voir, à l'aide d'une carte du pays, l'étendue des services dispensés par le ministère au Canada. A sa gauche, on reconnaît le directeur des Travaux maritimes, M. Walter Manning.



**ALGERIAN STUDENTS IN OTTAWA**—A group of students from l'École Nationale d'Administration d'Algérie visited Ottawa in July and at a reception in the National Library learned something about the Department of Transport. Inset, Gilles Sicotte, Assistant Deputy Minister General, with the aid of a map, outlines the various services administered by the department. With Mr. Sicotte is W. J. Manning, Director of Marine Works, who also addressed the group.

**Hospital art project**

One of the posters in the Children's Hospital Fund art project at Place de Ville in Ottawa was the work of Jacques Racine, with the assistance of his wife, Simonne. The work was sponsored by Transport Minister Don Jamieson, with Misses G. Price and E. Wilson as co-sponsors.

Born and educated in Montreal, Jacques is a graphic designer-illustrator with the department's Central Publishing Branch. He studied art at the Montreal Museum of Fine Arts and the New England School of Arts in Boston. He worked in advertising art in Montreal before joining the Public Service. He is at present a resident of Hull.

Father of four children, Jacques is a former president and co-founder of le Cercle des Artistes Publicitaires de Montréal and was an award winner of the Canadian Graphic Arts Association Symbol Design. His hobbies include the teaching of graphic expression to children, gardening, ceramics, pottery and sculpture.

Theme of Jacques' poster on Lyon Street is "Children and Love" and it symbolizes a crippled child with five heads (five main races) and 10 hands begging for collaboration and help.

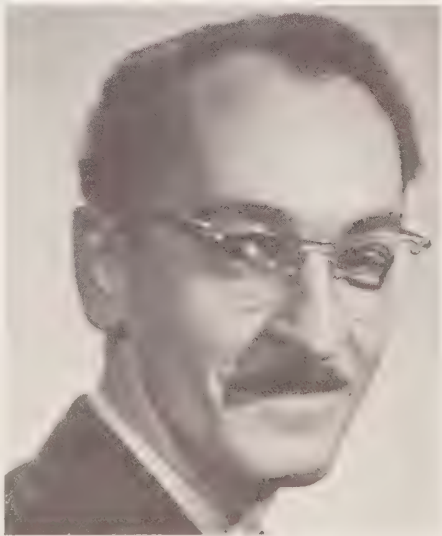
**Une contribution de valeur artistique**

L'une des peintures en montre sur la muraille entourant le projet de construction de Place de Ville, rue Lyon, est l'œuvre d'un employé du ministère, Jacques Racine, et de son épouse, Simonne. L'œuvre parrainée par le ministre des Transports, l'honorable Don Jamieson, et par Mlle G. Price et E. Wilson, a été exécutée dans le cadre de la campagne de souscription en faveur de l'Hôpital de pédiatrie de l'Est de l'Ontario.

Né et éduqué à Montréal, Jacques est un dessinateur attaché aux Services d'impression du ministère. Il a étudié au Musée des Beaux-Arts de Montréal ainsi qu'au New England School of Art de Boston. Avant de passer aux Transports, il était publicitaire à Montréal. Il demeure à Hull.

Père de quatre enfants, Jacques est un ancien président du Cercle des artistes de Montréal. Il a déjà remporté la palme à un concours de symboles organisé par la Canadian Graphic Arts Association. Dans ses temps libres, il enseigne l'expression graphique pour enfants, ainsi que la céramique, la potterie et la sculpture.

La peinture, rue Lyon, a pour thème: «les enfants et l'amour». Elle représente un infirme à cinq têtes (les cinq principales races) implorant de ses dix mains l'aide et la collaboration de tous les enfants du monde pour assurer la paix.



Jacques Racine



# Transport ALBUM des Transports



## **CCGS John Cabot**

The Canadian Coast Guard Ship *John Cabot*, named after the Anglo-Italian navigator and explorer, is an icebreaking cable repair vessel based at St. John's, Newfoundland. Built by Canadian Vickers, Montreal, it was completed in 1965.

LENGTH: 313 feet

BREADTH: 60 feet

DRAFT: 22 feet

POWER: Diesel Electric, 9,000

GROSS TONNAGE: 5,000 tons

## **Le n.g.c.c. John Cabot**

Le brise-glace câblé *John Cabot* est le premier de son genre au monde. Il a été construit par Canadian Vickers, à Montréal, et mis en service en 1965. Il a sa base à St. John's, Terre-Neuve.

LONGUEUR: 313 pieds

LARGEUR: 60 pieds

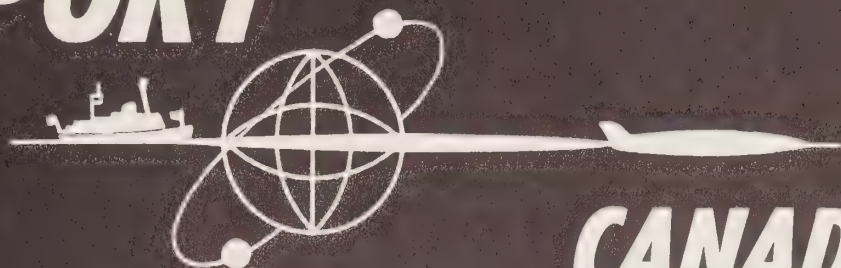
TIRANT D'EAU: 22 pieds

PUISSANCE: diesel-électrique, 9,000

JAUGE BRUTE: 5,000 tonneaux

# TRANSPORT

AIT 15  
T 61



# CANADA



JANUARY—FEBRUARY • 1970 • JANVIER—FÉVRIER



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Rédacteur français Edouard Deslauriers

L'IMPRIMEUR DE LA REINE POUR LE CANADA.  
OTTAWA, 1970.



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### COVER PHOTOGRAPH

**HISTORIC VOYAGE**—The United States tanker *Manhattan*, accompanied by the CCGS *John A. Macdonald* is seen in the redoubtable McClure Strait during the voyage through the Northwest Passage. It was McClure Strait which taxed all the power of the huge tanker and forced her to try an easier route (See story page 13).

### EN PAGE FRONTISPICE

**VOYAGE HISTORIQUE**—Le navire-citerne américain *Manhattan* est escorté par le n.g.c.c. *John A. Macdonald*, dans le redoutable détroit McClure, au cours du passage du Nord-Ouest. C'est le détroit McClure qui a mis à l'épreuve toute la puissance du gros navire-citerne et qui l'a contraint à chercher une route plus facile. (Voir récit à la page 15.)

# Transportation Council

## Le conseil des transports



### Problem of future traffic demand

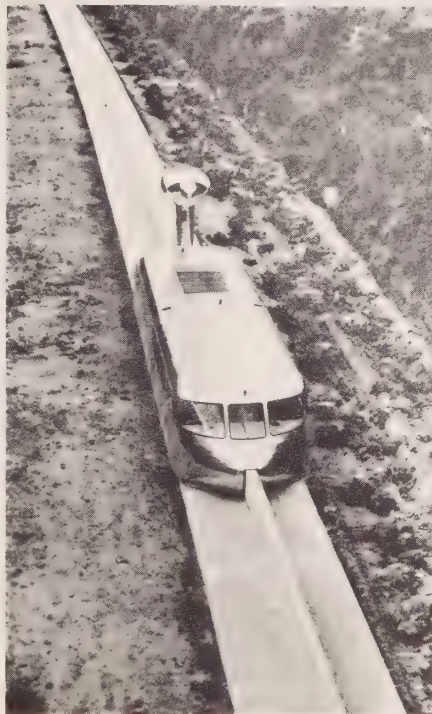
One of the most difficult, yet intriguing, questions facing Canadian transportation planners is the future efficiency of our inter-city travel facilities; especially in the Quebec City-to-Windsor corridor, embracing the rapidly-congesting core of our country's industry and population. By 1986, it is estimated that more than 14 million people will live in the corridor. Fast, effective inter-city transport is certain to become a crucial factor in the further development of this vital region.

A Canadian Transport Commission research team has been at work for almost a year studying the problem of future traffic demands and the best methods of meeting them. Last summer, 52,000 persons travelling between corridor cities supplied our researchers with case histories of their trips and computers are now increasing the data in order to establish the travel patterns which now exist and to forecast how these will grow and change in the future.

The C.T.C. team has also made a cost analysis of all the various alternatives for future travel, including both existing methods and those now under development. They have plotted the route of a track for hovervehicles and are examining the potential of short-take-off and landing aircraft and of high-speed conventional trains.

The information obtained from travellers and the cost comparisons are now being analysed in order to assess the relative merits of the various possible travel systems that might be adopted in coming years. The results will give transportation planners at all levels of government a scientific basis for deciding how our transportation dollars should be spent in the future.

HON. J. W. PICKERSGILL,  
*President, Canadian Transport Commission*



### Le problème des exigences du trafic futur

Un des problèmes les plus difficiles et les plus complexes que les planificateurs des transports au Canada ont à résoudre est l'efficacité future de nos services de transport interurbain, en particulier dans le couloir de Québec à Windsor, qui traverse le centre où l'industrie et la population du pays s'accumulent le plus rapidement. On prévoit qu'en 1986, plus de 14 millions de gens seront répartis le long de cette voie. Il est certain que le transport interurbain rapide et efficace sera un des facteurs importants du développement de cette région.

Une équipe de recherche de la Commission canadienne des transports étudie depuis près d'un an le problème de la demande future de transport et les meilleures méthodes pour le résoudre. L'été dernier, 52,000 voyageurs ont fourni à nos enquêteurs des compte rendus de leurs déplacements. Des ordinateurs évaluent présentement les données afin de définir les normes de voyage actuelles et de prévoir l'augmentation et les modifications qui s'annoncent.

L'équipe de la C.C.T. a aussi fait une analyse du coût des diverses méthodes de transport de l'avenir, y compris les méthodes actuelles et celles qu'on est en train de mettre au point. Les chercheurs ont fait le tracé d'une voie pour les aéroglisseurs et étudient présentement les possibilités des aéronefs à décollage et atterrissage courts et des trains conventionnels à grande vitesse.

On analyse présentement l'information obtenue des voyageurs et les comparaisons de coût afin d'évaluer les avantages relatifs des divers systèmes de transport qu'on pourrait adopter dans les années à venir. Le résultat permettra aux planificateurs de déterminer de façon scientifique la meilleure façon de dépenser l'argent qu'on destine au transport.

*Le Président de la Commission canadienne des transports,*

L'HON. J. W. PICKERSGILL





Duncan du Fresne with 1912 steam yard locomotive.

M. Duncan du Fresne et la locomotive de triage de 1912.

## Rail Relics are his Hobby

It's a far cry from sitting in front of a radar set controlling IFR air traffic at Ottawa Airport to firing and running a vintage locomotive, but that's the way it is with Duncan du Fresne, for running these old locomotives is his hobby.

Duncan, an Air Traffic Controller with Ottawa Terminal Control Unit, is a member of Ottawa Branch of the Canadian Railroad Historical Association and as such is actively involved in restoration work. He assisted in the work done on an 80-ton self-propelled railway wrecking crane and associated boom car and tender and worked on a Jordan Spreader (type of rail-mounted bulldozer) of the 1906 variety, a hy-rail car and a boarding car.

The steam crane is operated several times each summer as a non-profit public attraction on the grounds of the National Museum of Science and Technology in Ottawa. Mr. du Fresne has the honour of firing and running this old 1919 machine on such occasions.

During 1969 the National Museum acquired an operating 1912 steam yard locomotive and during last summer Mr. du Fresne fired and ran the locomotive on five occasions. During the July 1st weekend celebrations, he worked the locomotive for three hours each day on June 29, 30 and July 1, and hauled at least 3,500 people, young and old, in an open gondola car on the Museum spur track.

## Un amateur de vieilles locomotives

Il y a loin entre s'asseoir devant un écran radar pour contrôler la circulation aérienne à l'aéroport d'Ottawa et prendre les commandes d'une locomotive du début du siècle. C'est pourtant ce que fait Duncan du Fresne pour qui la conduite de ces vieilles et pesantes machines à vapeur est le passe-temps favori.

M. du Fresne, contrôleur de la circulation aérienne à l'aéroport d'Ottawa, est aussi membre de la section de la capitale nationale de la *Canadian Railroad Historical Association*. A ce titre, il participe activement à des travaux de réparation sur de vieilles locomotives et différentes machines à vapeur sur rail. C'est ainsi qu'il a aidé

à la remise en état d'une grue de démolition ferroviaire automotrice de 80 tonnes ainsi que du wagon et du tender qui l'accompagnent. Il a également travaillé sur un «Jordan Spreader» (espèce de bulldozer sur rail) construit en 1906, ainsi que sur le wagon-tombereau et la voiture-dortoir associés.

La grue à vapeur est mise en marche plusieurs fois chaque été, comme attraction publique à but non lucratif, sur les terrains du Musée national des sciences et de la technologie à Ottawa. A ces occasions, c'est M. du Fresne qui commande la manœuvre de cette machine de 1919.

En 1969, le Musée national des sciences

a acquis une locomotive de triage de 1912, en bon état de marche. C'est encore M. du Fresne qui, l'été dernier, a conduit cette locomotive, à cinq reprises. Pendant la fin de semaine du 1er juillet, il a pris les commandes de la machine les 29 et 30 juin ainsi que le 1er juillet, et l'a conduite pendant trois heures chaque fois, en traînant, au total, quelque 3,500 personnes installées sur une plate-forme roulante, sur la petite voie ferrée attenante au Musée.

Un peu plus tard, M. du Fresne a conduit la même locomotive pour pousser à l'intérieur du Musée une locomotive Diesel de 1950 et un fourgon de 1895, pour une présentation officielle.



## Photography in Bird Control for Air Safety



by Victor E. F. Solman, Ph.D.,  
Staff Specialist, A.R.D.A.  
Canadian Wildlife Service

In 1962 the problem of bird damage to aircraft had become so serious that the National Research Council of Canada was asked to investigate and make recommendations. The Associate Committee on Bird Hazards to Aircraft was formed to review the problem and direct research. The Committee included representatives from the National Research Council, the Departments of Transport and National Defence, the major airlines, the aircraft manufacturers, the Canadian Airline Pilots Association, and the Canadian Wildlife Service.

The initial review of the problem revealed that birds visit airports for a number of reasons and that they can be discouraged if the attractions are removed or greatly reduced. That problem was clearly biological. The representatives of the Canadian Wildlife Service studied more than 70 airports to define the problem and to recommend solutions. The solutions were neither easy nor cheap, and often involved major changes in the airport environment to make it unattractive to birds.

Even when most of the obvious bird attractions had been removed, there were occasional visits by birds. These birds had to be driven off by emergency methods. Ways that were tried ranged from playing records of bird alarm calls through the use of mechanical scaring devices to the use of trained falcons. All the methods tried were useful in certain conditions, but none were entirely satisfactory in all conditions.

The single most important factor in getting rid of birds was human motivation: the determination on the part of the persons exercising the control to remove birds before they caused damage. One of the most effective scaring devices was, and still is, the careful use of exploding shotgun shells to break up concentrations of birds and drive them away.

### Two problems

It was realized from the beginning that birds caused two problems for aircraft operators. The first problem involved the danger birds pose to aircraft moving on the airport, preparing to land, and taking off. For example, an Electra taking off from Boston Airport in 1960 crashed after striking a flock of starlings. Sixty-one people were killed, and eleven more were injured.

The other problem involved areas away from the airport, particularly during the time of migration, when large numbers of birds travel to and from their breeding grounds. In a typical autumn, 75 million ducks, 5 million geese, 350 thousand cranes, 100 thousand swans and much larger numbers of small birds move south across the transcontinental airways. Many of these migrate at night, when visual observation is difficult or impossible.

The seriousness of that problem was shown when a Viscount aircraft collided with two whistling swans while flying more than 5000 feet above the ground in the autumn of 1962. The aircraft was severely damaged and crashed with the loss of 17 lives. Clearly there was a need for a way to study bird migration to learn of the bird traffic at various times and places and to work out methods by which aircraft could avoid those areas.

It had been known since World War II that birds could be detected by radar. It was desirable to study bird migration by using that method to the best advantage. Initial studies made by direct viewing of the presentation of a plan-position radar-scope indicated the difficulty of working by that method. Photography of the radar-scope overcame the difficulty of live obser-



vation, simplified the making of observations, and provided a permanent record for later study. The image of a radarscope can be made sufficiently bright for it to be photographed with a conventional still camera on black-and-white film by using lenses of moderate speed.

### Picks up echoes

The radar used for airway traffic control presents an image of an area surrounding the radar antenna. The antenna rotates and picks up echoes from objects in all directions in a circle of which the radius may extend as much as a hundred miles from the airport. A new image is created at frequent intervals, customarily every 10 seconds. Echoes from high-speed aircraft move perceptibly between succeeding echoes shown on the radar beam. If a time exposure is made, the echoes recorded on each successive sweep produce a line echo on the photograph. The line extends in the direction of movement and its length indicates the speed of movement.

The same technique can record echoes of birds, but because of their relatively slow speed, the exposure must be longer to show movement. If a camera is mounted to photograph the radar screen so that time exposures can be taken as needed, and a clock and calendar are included in the picture, a permanent record is available of the radar presentation of the bird echo occurrence.

To obtain useful information on bird presence, the exposure may need to be as long as 10 minutes. It is usually desirable to know the direction of movement of the birds. That can be indicated by making a 10-minute time exposure followed after two minutes by a further two minutes exposure. The result is a line followed by a dot for each bird echo, the dot indicating the direction of movement of the birds that give the line echoes. Each bird or group of birds appear as a line in the 10mm time exposure.

### Complexity of movement

Although the still-camera time-exposure technique provides useful information and can provide it very quickly through the use of a Polaroid camera, it was soon found that time-lapse motion pictures were far better for revealing the complexity of the movement.

The motion picture cameras that were selected needed to provide single-frame exposures for each sweep of the radar, then allow a short period in which the shutter was closed and the film advanced. A suitable electronic intervalometer was devised to actuate the camera automatically, so that a technician was needed only once or twice a day to reload the camera with film or maintain the equipment.

When the films are projected at normal projection speed, the time is compressed by a factor of 240. This makes it possible to review quickly large amounts of study film taken from a group of radar sets scattered across the continent.

The use of a motion picture camera to take very large numbers of single-frame exposures at 10-second intervals for periods of as long as 12 months imposes a severe strain on the camera mechanism. To project the films at normal speed without irregularity, it is desirable to have a camera in which film registration is very exact during exposure. The most suitable equipment is quite expensive, and we have not yet found a camera that will provide the desired service for long periods without maintenance. Some cameras, even though expensive, have components that break down quickly under the successive shocks of single-frame operation. To secure reasonably dependable observation, it was necessary to rebuild the drive mechanisms in several cameras by using stronger-than-standard materials for gears and other components.

The film can be studied either as a negative or as a positive, depending on the preference of the worker. The cost of direct reversal positive film is somewhat higher than that of negative film.

### Changing patterns

The films show the changing patterns of bird movement very well and dramatize certain aspects of bird movement, especially dispersal from roosting concentrations.

In order to analyze the very large quantities of data that have been collected during the study period, pertinent data from the film record on each bird occurrence are coded for computer input. The data can then be correlated with weather data from the local areas concerned, as well as from the areas from which the bird movement has come. The relation of weather to bird movement is complex, but it has been possible to find good correlations between certain autumn weather patterns and the autumn migration of waterfowl that occurs at that time. There are equally good correlations for the spring migration of some important species. Local bird movements studied by the same technique are usually more closely related to daily environmental cycles, which shift gradually as the seasons change.

Once the correlations between bird migration and weather are known, it is possible to forecast bird migration in relation to weather forecasts. Experimental forecasts of bird migration have been made and have been used to adjust training programs in flying. The accuracy of those forecasts can be, and has been, checked against radar observations and photographs taken during

the valid period of the forecast.

We have still a long way to go to achieve the level of accuracy needed for use of bird hazard forecasts in aircraft traffic control programs. Our aim is to enable aircraft operators to avoid concentrations of migratory birds in the way they presently avoid hazards such as thunderstorms. We have not lost any military aircraft because of thunderstorms for the past several years. We have lost at least seven military aircraft through bird collision in the last four years. As our methods of forecasting the location, duration, and intensity of bird hazards improve, damage and loss of aircraft will decline. Without the presently available photographic techniques for recording the radar data, we would not be able to study the problem as we have, nor could we have demonstrated it to the agencies who need the information to improve safety of aircraft operation.

*(This article is published in "Transport" through the courtesy of the Journal of the Biological Photographic Association, Inc.)*

## Retirements

Retirements in department, with date of retirement and years of service:

C. Connor, Saskatoon, Oct. 16—27 years;  
H. T. Fortune, Ottawa, Oct. 18—35 years;  
Miss A. R. Garey, Saint John W., N.B., Feb. 1, 1970—37 years;  
A. Lindsay, Ottawa, Oct. 30—24 years;  
K. B. McLennan, Chatham, N.B., Sept. 27—30 years;  
W. D. L. Murray, Richmond Co., N.S., Sept. 4—39 years;  
Roland M. Richards, Sydney, N.S., Nov. 1—34 years;  
J. A. Riordan, Saint John, N.B., Jan. 3, 1970—15 years;  
Archibald A. Stanford, Gander, Nfld., Oct. 14—20 years;  
C. G. Thomas, Saguenay Co., N.S., Oct. 1—37 years;  
T. H. Toomey, Ottawa, Oct. 21—42 years;  
D. G. A. Urquhart, Vancouver, B.C., Jan. 23, 1970—25 years;

*(Other retirements and pictures page 24).*

# Les aéroports canadiens dotés de l'éclairage le plus moderne

Parmi les aides à la navigation dispensées aux aéroports du Canada, l'éclairage des aéroports est l'un de ceux dont nous pouvons, au ministère des Transports, nous enorgueillir à juste titre. Depuis les débuts de l'aviation, le Canada a été l'un des pionniers dans ce domaine, et certaines des mises au point les plus récentes sont dignes d'être mentionnées.

La sécurité aux aéroports a toujours revêtu la plus haute importance dans l'esprit de ceux qui ont mis au point les systèmes d'éclairage au Canada, si bien que presque tous les aéroports du ministère des Transports sont dotés d'un groupe électrogène de secours. Ces groupes se mettent en marche automatiquement en cas de panne de courant commercial, afin d'assurer en tout temps l'utilisation de la piste et l'éclairage des approches.

La grande panne d'électricité du 9 novembre 1965, qui a plongé dans l'obscurité la plus grande partie du nord-est des États-Unis et les régions avoisinantes du Canada, a permis d'illustrer combien notre ministère fut avisé en effectuant ces installations. Même de nos jours, nombre d'aéroports importants des États-Unis ne disposent pas de telles installations de secours en cas de panne.

Ces dernières années, on s'est efforcé, en

raison du formidable développement de l'aviation commerciale et du coût élevé de l'exploitation des grands aéronefs commerciaux, d'accroître les heures autorisées de décollage et d'atterrissage afin de perturber au minimum les horaires des transporteurs aériens. Cela a entraîné l'emploi d'aides à la navigation supplémentaires pour permettre aux pilotes de circuler lorsque les conditions météorologiques étaient plus mauvaises que celles jusqu'ici acceptées pour la circulation.

## Feux d'axe de piste

C'est en novembre 1967 qu'on a commencé la première installation de feux d'axe de piste au Canada. En février 1968, cette installation a été en service à titre expérimental sur la principale piste est-ouest de l'aéroport international de Toronto.

Cette installation, avec ses feux d'axe de prise de contact et ses feux de virage en surface à grande vitesse (photo au haut de la page), se compose de 412 balisages lumineux, d'environ 12 pouces de diamètre, encastrés dans la surface de la piste. Ces feux projettent un rayon de lumière étroit à un angle déterminé à l'avance pour guider le pilote dans la partie délicate de son atterrissage, soit depuis le moment où son appareil se pose sur la piste.

L'intensité de ces feux, ainsi que celle des feux de bordure de piste et des feux d'approche à haute intensité, est réglée par la tour de contrôle, à la demande du pilote. La charge électrique de ce système d'éclairage de piste seul est de 250 kW et est évidemment renforcée par un groupe électrogène de secours à moteur diesel.

Pour les opérations de nuit, les feux d'axe de prise de contact ont largement contribué à diminuer l'impression qu'ont les pilotes d'atterrir dans un «trou noir».

D'autres aéroports importants du Canada sont sur le point d'être dotés d'éclairages semblables ainsi que d'autres aides modernes à la navigation aérienne.

## Une autre «première»

En plus d'être doté de cet éclairage moderne, l'aéroport international de Toronto fut le théâtre d'une autre «première». Toronto a quatre pistes: la 05R-23L, la 05L-23R, la 14-32 et la 10-28. Chacune d'elles possède une approche dotée de feux à haute intensité. Jusqu'à ces derniers temps, on ne pouvait éclairer qu'une seule de ces approches à la fois. On peut désormais allumer simultanément deux systèmes de feux d'approche pour permettre des atterrissages ou des décollages simultanés sur des pistes choisies. C'est le seul aéroport au Canada doté d'un tel système et, à notre connaissance, le seul aéroport au monde où cette possibilité est renforcée par un groupe électrogène de secours, sur place.

Advenant une panne de courant en cours d'utilisation, les systèmes d'éclairage des approches choisies et les systèmes d'éclairage de piste correspondants sont automatiquement alimentés par le groupe électrogène de secours.

La conception et la modification du programme de contrôle prévu pour réaliser cette opération est l'œuvre de M. R. G. Smith, ingénieur-électricien de la région de l'Ontario, assisté de M. Keith Wray, électricien de l'aéroport international de Toronto.

L'entretien du système de feux d'axe de piste constituait un nouveau défi pour les électriciens de l'aéroport de Toronto. L'expérience acquise dans l'entretien de ces installations a fait l'objet d'une documentation soignée qui a été distribuée à tous les aéroports qui seront dotés d'installations analogues au cours des prochaines années.





# ESSAIS D'UN HÉLICOPTÈRE GÉANT



Un hélicoptère utilisé par les États-Unis pour transporter des troupes et des munitions au Viet-Nam a fait l'objet d'essais, dans l'Arctique, par le ministère des Transports.

Cet hélicoptère, surnommé la grue volante «S-64 Skycrane», est fabriqué par la compagnie *Sikorsky Aircraft* du Connecticut. Contrairement aux hélicoptères classiques, la cabine du S-64 n'occupe qu'une minime partie de l'appareil dont la longueur est de 88 pieds et demi.

Au cours des essais dans le Nord, deux établissements esquimaux lointains de l'Arctique ont été approvisionnés en matériaux de construction et autres grâce à la grue volante qui a servi pour le débarquement. L'hélicoptère géant a déchargé du navire plus de 1,800,000 livres de matériaux, y compris une maison préfabriquée et les matériaux de construction pour un ajout de six pièces à une école, et les a déposées sur le rivage des établissements de Cape Dorset et Coral Harbour sur l'Île de Baffin.

Selon M. John Stewart, préposé à la planification auprès de la Direction des opérations de la marine, les essais ont démontré que la grue volante représente le moyen le plus économique pour transporter les marchandises conteneurisées ou autres du navire au rivage. «Non seulement ce moyen est-il plus rapide, mais les dommages dans la manipulation des matériaux et fournitures sont moindres», de déclarer M. Stewart.

On se sert habituellement de barges pour décharger les navires dans les villages de l'Arctique qui ne sont pas pourvus de ports ou de jetées. Les barges ne peuvent être

**PAR LA VOIE DES AIRS**—La grue volante S-64 enlève du navire *Sir John Crosbie* une charge conteneurisée destinée à un village canadien éloigné de l'Arctique. Grâce à la grue volante, on économise beaucoup de temps et on évite le transbordement classique des marchandises sur des barges pour les débarquer dans des endroits où il n'y a ni port ni jetée.

**FROM SHIP TO SHORE**—A containerized load of supplies for a remote Canadian Arctic village is flown away from the ship, *Sir John Crosbie*, by the S-64 Skycrane. The Skycrane operation saved much time over conventional methods which employ barges to move goods from ship to shore in areas where there are no harbours or piers.

employées qu'à marée haute et par mer calme. Le nombre d'endroits se prêtant au déchargement des barges est restreint, alors que la grue volante a pu déposer les matériaux à l'endroit même où ils seraient utilisés ou très près de cet endroit. Le déchargement des matériaux par barge peut prendre des jours et même des semaines de plus qu'avec la grue volante.

Lors du déchargement par barge, on estime que 25 à 35 p. 100 des marchandises peuvent être endommagées alors qu'avec la grue volante cette proportion est inférieure à 2 p. 100.

Au total, 238 vols ont été effectués dans ces essais. Le poids total des matériaux transportés s'est élevé à 1,088.9 tonnes, y

compris les conteneurs, les plate-formes et l'essence. Sur ce total, 908 tonnes ont été livrées aux deux villages intéressés. Pour la manutention des matériaux à terre, la grue volante a débarqué des chariots élévateurs du navire et les a ensuite rembarqués sur le navire une fois le travail terminé.

Le ministère s'est également servi de la grue volante pour la pose d'aides à la navigation dans la région de Prescott. L'exercice fut un succès. On peut aussi l'utiliser pour approvisionner les phares.

Les établissements de l'Arctique ne peuvent être approvisionnés qu'au cours des mois d'été en raison des rigueurs hivernales. Le ministère songe à faire des expériences plus poussées l'été prochain.

# Arctic Trials for Giant Helicopter

A helicopter that has been used by the U.S. to fly troops and munitions into Vietnam and has been the subject of Department of Transport trials in the Arctic was seen at a demonstration at Uplands Airport.

The helicopter, the S-64 Skycrane, is manufactured by Connecticut-based Sikorsky Aircraft. Unlike the conventional helicopter, the S-64's cockpit bubble is only a small part of the entire vehicle, which measures 88½ feet in length.

During the trials carried out by the department, two remote Arctic Eskimo settlements were re-supplied with building and other materials with the help of the S-64 Skycrane in a ship-to-shore airlift operation. More than 1.8 million pounds of supplies, including a complete prefabricated house and material for a six-room addition to a school, were unloaded from a ship by the big helicopter and placed on shore at Cape Dorset and Coral Harbour in Baffin Island.

According to John Stewart of the department's marine operations planning, the trials have shown that the S-64 Skycrane is the most economic method of delivering containerized and uncontainerized cargo from ship to shore. "This method not only saves time but reduces damage in the transporting of materials and supplies," says Mr. Stewart.

Barges are the usual means of unloading the ships at the villages in the Arctic where there are no harbours or piers. The barges can operate only at high tides and in calm seas. While the areas at which the barges can unload are limited, the Skycrane was able to place the loads at the point of their use, or nearby these points. The barge operation can take days and even several weeks longer than the method employing the Skycrane.

Damage to cargoes in the barge operation can range as high as 25 to 35 per cent, but damage totalled less than two per cent in the Skycrane operation.

A total of 238 sorties was flown in the department's northern operation. Total weight carried was 1,088.9 tons, including cargo containers, pallets and fuel. Of this, 908 tons were supplies delivered to the two villages. To handle the supplies ashore, the Skycrane carried fork lift trucks from the ship, then flew them back when the job was completed.

Mr. Stewart says that the department has also used the S-64 Skycrane in the placing of aids to navigation in the Prescott Marine Agency and this has been another successful operation. The Skycrane can be used also for supplying light stations.

The Arctic settlements can be re-supplied only during the summer months because of the weather extremes that occur in the winter. More trials are being considered by the department for next summer.

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## RESOLUTE MUSINGS

By Carle A. Rigby

*In the dead of night  
With the ice all white  
'Neath the midnight afterglow,  
While the gentle swell  
Moves the ship as well,  
But so light one would hardly know.*

*It is good to know  
That way "down below"  
There's an August moon tonight;  
And that warm night air  
Stirs the green leaves there  
In the moonbeams' silver light.*

*But our hardy crew  
Has a job to do  
And they'll get it done, in time;  
Then the old "McLean"  
Will head South again  
To a more congenial clime.*

*But it's good to know  
As we wait the blow  
That clears Resolute of ice,  
That our work means life  
To each man and wife  
Who quite happily pay the price,*

*Of real isolation  
On many a station  
Where ships come once a year;  
While they serve as teachers  
And nurse fellow creatures  
On this, our last frontier.*

*It's a privilege,  
In this day and age,  
That we, too, may "also serve";  
So we lie and wait  
In this Northern gate  
As the ice pans gently swerve.*

*But the time is near  
When the people here  
Shall be cheered by a satellite;  
When they'll have TV  
And may daily see  
Things to bring both fun and fright.*

*Then their peace of mind,  
Like the Arctic wind,  
Will depart where the wind doth blow;  
And their snug retreat  
From Life's surge and beat  
Will no longer be sane and slow.*

*So let's breathe a sigh  
For the days gone by  
When the White North was serene;  
Then let's breathe a prayer  
That the life "up there"  
Like the snow, continues clean.*

Written on board the "N. B. McLean," oldest C.C.G. Ship, on the 40th voyage through Eastern Arctic, August 20, 1969.



# Longest lived Canadian steamboat

by Thomas E. Appleton,  
Historian, Marine Services

Some Canadian Coast Guard ships have lasted a long time and have given long services. The *Lady Laurier* was 58 when she was scrapped and the *Estevan*, near enough the same age, may well last longer. These two look like sharing the record for continuous service but for sheer long life they barely make half the span of the *Richelieu*. This vessel was 115 when she finally dropped out of the register in 1960, and was by far the oldest steamboat in Canada, if not in the world.

The *Richelieu* was no kicken when the government bought her in 1869 to patrol the St. Lawrence and recover buoys, which were often swept away by rafts of squared timber as they drifted down from the upper Ottawa to Quebec. She was operated at that time by Trinity House of Montreal, who noted that:

"The Board, fully alive to the importance of instantly replacing displaced buoys, sought and obtained the sanction of the Governor General in Council to acquire a steamboat; the *Richelieu* was subsequently purchased and the service has since been performed in a satisfactory manner . . ."

But pleased as they were with the *Richelieu's* performance, the Board had some qualms about the soundness of their bargain, noting that:

"... she is an old boat, built of iron, but in good order; last Spring several plates were found to be leaky and she was consequently hauled up and new plates put in. Her boiler was also repaired and new beams and stanchions . . ."

## Fears premature

In fact, the fears of the Board were premature and the *Richelieu* was to be paddling her way across the St. Lawrence long after the Trinity House was forgotten and its members dead and buried.

The *Richelieu* was a paddle steamboat, of 130 feet and 125 tons gross as originally designed. She had been built at Montreal in 1845 to carry passengers and market



**VETERAN STEAMSHIP**—This picture of the *Beauharnois*, formerly the *Richelieu*, was taken in August 1959 and gives the appearance that she had gone ashore at this point. The idea had been to convert her into a restaurant, but this did not materialize.

(Photo, courtesy of Daniel C. McCormick. Steamship Historical Society of New York.)

produce from towns and villages near the Richelieu River to the big city. The builders are unknown, but the first owners were John Campbell and J. Williamson of Montreal. The hull was made of iron, one of the first in North America, and was fitted with a single cylinder beam engine of the type then almost universal. Not much is known of the *Richelieu* in those early days, but she apparently gave good service, although she was not especially noteworthy among the dozens of similar steamboats which were then common carriers of Eastern Canada.

Under Trinity House ownership the *Richelieu* was based on Three Rivers, where she later continued on the same work under the Montreal Harbour Commissioners. She would probably have remained there until retirement had it not been for a nasty accident in October 1877. At that time she was in collision with the steamboat *Rocket* and sank in 22 feet of water near Cape Madeleine. The problem now was what to do with her; the Harbour Commissioners surveyed the wreck which they calculated would cost \$6,000 for salvage and repair. As the *Richelieu* had been valued at only \$5,000 they solemnly concluded that:

"... as nearly as could be estimated the wreck was not worth raising and repairing by \$1,000."

## Served as ferry?

However, as others have found since in the salvage business, there is more to it than proficiency at arithmetic. Some entrepreneur saw his chance, and she was later raised and is believed to have served as a ferry in the Kingston area. At any rate, by 1892, we find the old *Richelieu* under the ownership of S. Filgate of Montreal, who sold her to J. A. Desrochers of Beauharnois in 1905. So well known did she become in that area that the name was officially changed to *Beauharnois* in March 1906, and the vessel continued there under various owners until 1930, when she was bought by La Cie de Traverse Valleyfield-Coteau.

As the years wore on, the old *Beauharnois* steamed well and faithfully between Beauharnois and Montreal, shooting the rapids every morning and climbing back by the Lachine Canal, until about 1925 or 1926. She then became a ferry between Coteau-du-Lac and Salaberry Island but was laid up for a period following a bad fire in 1940 which destroyed the superstructure.

# Baptême de deux navires de la Garde côtière canadienne



Beth Anderson

## From Lighthouse to University

Miss Elizabeth J. Anderson, 20-year-old daughter of the lightkeeper at Race Rocks Lightstation, B.C. was very happy and surprised when she received word that she had been awarded a D.O.T. Scholarship.

"We are very proud of this achievement since this is the first scholarship awarded to anyone connected with the Victoria Marine District," says L. E. Slaght, District Manager.

Beth is at present attending the University of Victoria, where she is studying to obtain a Bachelor of Education degree enabling her to teach physical education. This is a five-year course.

The Andersons are a very closeknit family and Beth attributes this to living on lightstations. She found this way of life very pleasant and particularly enjoyed it when her two older brothers were also at home. One younger sister is studying by correspondence from Race Rocks Lightstation and is now in grade six.

Recently a graduate from Belmont High School in Victoria, Beth's hobbies include skating, swimming and sewing, although at the moment she is still getting organized at the University and does not have too much spare time.

Her ambition for the future is to travel to Italy to see Michael Angelo sculptures, but this will come after a few years teaching.

Le *Provo Wallis* et le *Bartlett* sont des ravitailleurs et baliseurs conçus pour la navigation dans les eaux côtières. Ils ont été construits pour remplacer des navires qui sont désaffectés à cause de leur âge. Chacun de ces navires porte un équipage de 37 hommes, y compris huit officiers.

Le *Provo Wallis* porte le nom de Sir Provo William Parry Wallis, né en Nouvelle-Écosse et dont la carrière distinguée dans la marine fut couronnée, en 1877, par sa nomination au poste d'Amiral de la flotte. Né à Halifax en 1791, fils d'un commissaire des chantiers navals, il mourut en Angleterre en 1892.

Le n.g.c.c. *Bartlett* porte le nom du capitaine Robert Bartlett, célèbre navigateur et explorateur de l'Arctique qui a pris part à diverses expéditions dans le Grand Nord, y compris celles de Peary et de Stefansson. Le capitaine Bartlett est né à Brigus, baie de la Conception, à Terre-Neuve, le 15 août 1875. Il mourut à New York, le 28 avril 1946.

Au nom du ministère des Transports, le sous-ministre adjoint à la marine M. Gordon W. Stead, a félicité Marine Industries au sujet de la construction de ces deux excellents navires et a offert à leurs officiers et aux membres d'équipage ses meilleurs vœux de succès dans le travail qu'ils entreprendront au service de la Garde côtière canadienne.

### More Cars Than Babies

Canada's automobile population in 1968 increased by 5% to 6,159,573, the Dominion Bureau of Statistics reported. That's one for every 3.4 people. DBS also said automobile ownership expanded at more than three times the rate of population growth. Registration of all motor vehicles rose 5.4% to a total of 7,887,077.

Deux nouvelles unités de la Garde côtière canadienne, le *Provo Wallis* et le *Bartlett*, ont été baptisées aux chantiers de Marine Industries Limited, à Sorel, le 18 octobre 1969.

Mme A. H. G. Storrs, épouse du directeur des Opérations de la marine au ministère des Transports, a été la marraine du n.g.c.c. *Provo Wallis*, tandis que Mme Florian Côté, épouse du député fédéral de Richelieu, a baptisé le n.g.c.c. *Bartlett*. Des représentants des divers paliers de gouvernement et de l'industrie maritime, de même que des hauts fonctionnaires du ministère, assistaient à ce double baptême.

### Longest lived Canadian steamboat (cont'd)

She was eventually rebuilt and returned to service in 1948, but it was found old age could not be held at bay any longer. The hull was dragged ashore a few years later and placed in a man-made channel and the excavation filled in and machinery removed. When this was all done the old steamboat gave the appearance of sailing serenely across the grass. The intention was to convert the structure into a restaurant but this project was abandoned. Later someone thought that the wreck might be restored and sent to Upper Canada Village, but this too was found to be impracticable and the remains fell to bits and were abandoned. After 1960 the *Beauharnois*, ex *Richelieu*, disappeared from the Register of Shipping.

*This short article about the remarkable Richelieu would not be complete without acknowledgement of the contribution made by my old friend George Ayoub of Ottawa, whose records of Canadian steamships are unique in their value to marine historians.*



**A WHALE OF A FLOAT**—This Dartmouth Marine Base float drew a lot of attention when it was entered in three parades last year—the Halifax Naval Day Parade, the Dartmouth Naval Day Parade and the Lunenburg Exhibition Parade. It won second prize on the first two occasions and third prize in the latter. Among those who devoted time and talent in the construction of the whale were "Doc" Hiltz, Pat Connors, Gordie Stevens, Harold MacDonell, Elmer Kent and Harry Farmer. The whale consisted of a wooden frame, chicken wire and papier mache. The moveable eyes and the water spout were controlled by an intricate system of electric motor, pulleys, belts, chains, valves, compressed air and an old light-house clockwork mechanism.



**LAISSEZ PASSER LA BALEINE**—Le char allégorique de la base navale de Dartmouth a attiré les regards lors de sa participation l'année dernière à trois défilés—le défilé de la fête de la marine de Halifax, celui du jour de la marine de Dartmouth et le défilé de l'exposition de Lunenburg.



**IT WAS JUST A TEST**—This photograph was taken in October 1969 when a breathalyzer was used for demonstration purposes at a meeting with industry on the subject of drinking and driving. Since then, the breathalyzer has become a legal instrument used to measure blood alcohol content. Any person suspected of driving a motor vehicle with a blood alcohol level over .08 may be required to take the breathalyzer test. An RCMP constable acted as a test subject in this case. He is shown here blowing into the machine operated by Staff-Sergeant King Ackland of the Ottawa Police Department. Looking on, from left to right, are the Honourable John Turner, Minister of Justice, the Honourable Don Jamieson, Minister of Transport, and François Smet, of Montreal.

**C'EST MAINTENANT CHOSE SÉRIEUSE**—Lorsqu'on a pris cette photo, en octobre dernier, c'était pour démontrer le fonctionnement de l'ivressomètre à l'occasion d'une rencontre avec des représentants de l'industrie. Les discussions à la rencontre avaient porté sur la conduite automobile et l'alcool. Depuis lors, l'ivressomètre est couramment en usage. Il sert à mesurer la quantité d'alcool dans le sang. Quiconque est soupçonné de conduire un véhicule alors que son sang contient plus de .08 pour cent d'alcool peut être requis de subir le test de l'ivressomètre. Dans cette photo, un agent de la Gendarmerie royale se soumet au test que lui fait subir le sergent d'état-major King Ackland, à droite, de la Sûreté municipale d'Ottawa. De gauche à droite, surveillant attentivement la démonstration, on voit le ministre de la Justice, l'honorable John Turner, le ministre des Transports, l'honorable Don Jamieson, et M. François Smet, de Montréal.

# “Welcome back” in Halifax Harbour for giant tanker and *John A. Macdonald*.

A formidable venture which may profoundly affect the future development of the Canadian Arctic was completed last November when CCGS *John A. Macdonald* returned to a tumultuous welcome in Halifax harbour after an epic two-month return voyage through the Northwest Passage.

Transport Minister Don Jamieson and senior officials of the Department were on hand to congratulate Captain Fournier and his crew on doing their duty in such exemplary fashion.

The icebreaker was on a “summer cruise” as companion to the United States tanker

*Manhattan*, a huge vessel specially reinforced for working in ice.

The tanker had sailed through the Northwest Passage to Alaska and back to test the hazards and to establish, by a multitude of tests, the size and strength necessary for ships to travel on a regular basis to and from the rich Alaska oil fields.

The 150,000-ton tanker’s journey was planned and executed by the Humble Oil Company on behalf of a consortium, which includes Atlantic Richfield and British Petroleum. Assistance and support was provided by the Canadian Department of Transport and the U.S. Coast Guard.

### Westward Voyage

The westward voyage was surely one of the best publicized of all Arctic expeditions. The *John A. Macdonald* carried Canadian newspaper and radio correspondents, as well as television crews and senior commentators. The *Manhattan* and the U.S. Coast Guard ships carried newsmen from all major media in the United States.

The ice was thick and the pressure immense in Viscount Melville Sound. The American icebreaker, *Northwind* had to drop out and Captain Fournier of the *John A. Macdonald* called on his great icebreaking experience on several occasions to free the huge tanker from the ice which had halted her progress.

The efficiency of Captain Fournier and his crew led the Canadian newsmen aboard to wire a recommendation to the Prime Minister that the Captain be specially commended.

Captain Fournier’s log carries this report on the rescue of a crashed helicopter in an area where the ice, in some places measured eight-and-a-half feet thick.

“Received request from *Manhattan* to assist in recovering one of their helicopters. We proceeded through ten-tenths (total cover) multi-year ice (the older the ice, the harder it is) for four miles to where the helicopter was lying on her starboard side in a puddle, and after shifting control to the navigation bridge the *Macdonald* was brought alongside the helicopter. The aircraft and one pontoon and wheel which had broken off were hoisted aboard in two lifts and secured on the helicopter landing deck.



Transport Minister Don Jamieson emerges from helicopter to welcome back Captain Paul Fournier after *John A. Macdonald*’s epic voyage.

Le ministre Don Jamieson descend d’un hélicoptère pour se porter à la rencontre du capitaine Paul Fournier après l’historique voyage du *John A. Macdonald*.



Stan Haas of Humble Oil presents Captain Fournier with plaque to be installed on *John A. Macdonald*

M. Stan Haas, de la compagnie Humble Oil, présente au capitaine Fournier une plaque commémorative qui sera installée à bord du *John A. Macdonald*.

Earle Gray Photo

(continued on page 14)



"The *Macdonald* then steamed to the *Manhattan* and after securing port side to, the damaged helicopter was placed on the main deck aft port side of the tanker. We then backed off and put ourselves into the ice to await the *Manhattan* getting underway."

### Superb Seamanship

Ray Stone, our information officer aboard, added: "These cool statements do not reveal the astounding efficiency, flashes of bravery and superb seamanship of Captain Fournier and his men. The chances of recovering the nine-passenger helicopter, which weighed over two tons and which had broken through the ice, seemed very slim. As the captain gently manoeuvred his ship's stern into position just a few yards from the chopper it seemed certain that it would disturb the ice and cause the aircraft to sink.

"Members of the *Macdonald's* crew were lowered to the ice, where they quickly clambered atop the chopper and secured the cable. After a co-ordinated shifting of the ship and the winch, the helicopter was quickly lifted onto the *Macdonald's* deck. The reaction on the *Manhattan* when we presented them with their damaged chopper was one of grateful amazement."



On board the *Manhattan* during the voyage, Captain Paul Fournier, centre, chats with Stan Haas, right, project manager for Humble Oil, and Captain Tom Pullen, Canada's representative aboard the tanker.

The *Manhattan* assayed a westward passage through the redoubtable McClure Strait and for a while threatened its record of never having been traversed from east to west. However, thick, multi-year ice under great pressure finally stopped the huge tanker.

The final solution was for the tanker to shut off nearly all facilities which required power, so that every ounce of available energy could be applied to her propellers. The tanker succeeded in bursting out of her icy prison, turned her back on rugged Mc-

Clure Strait, and headed for the relatively easy Prince of Wales Strait.

The two vessels reached Sachs Harbour, on the west coast of Banks Island, on September 16, 17 days after she had met the *Macdonald* in Davis Strait.

The voyage then continued to Prudhoe Bay, Alaska, where the oil fields are located, and on then to Point Barrow.

### Return trip

The return trip was more leisurely, permitting the *Manhattan* to conduct more extensive tests in the ice. With some 300 sensors installed, and other testing equipment, the tanker amassed an enormous amount of data for computer analysis.

The two vessels were joined for the return trip by the U.S. Coast Guard icebreaker *Staten Island* and what will be determined as a result of the trip remains to be seen. However, it can have great impact on the Canadian north, where oil and other mineral wealth abounds.

The *Macdonald* played a historic role in making the collection of important data possible, as Stanley B. Haas, who was in charge of the "*Manhattan*" test program, declared:

"I don't believe that our ship really could have made it through the Northwest Passage, as you are aware, without the assistance of the *John A. Macdonald* at critical passages in the voyage. Obviously, it might have taken a lot longer or we might have stayed certainly very much longer in some of those ice floes without the able assistance of the *John A. Macdonald* and Captain Fournier, who we think on the *Manhattan* has displayed extraordinary icebreaking ship-handling capabilities."

In addition, great assistance was provided throughout the voyage by the department's Meteorological Branch, which provided continuous ice reconnaissance from aircraft that kept the convoy informed of the ice conditions that lay ahead.



Transport Minister Don Jamieson and Captain Roger Steward examine D.O.T. gift to the *Manhattan* of a large colour photo of the giant tanker and her Canadian escort.

Le ministère des Transports fait don au *Manhattan* d'une photo en couleur faisant voir le pétrolier américain accompagné du *John A. Macdonald* dans l'Arctique. Le ministre Don Jamieson et le capitaine Roger Steward sont photographiés au moment de la présentation.

# Chaleureux accueil à Halifax pour le «John A. Macdonald»

Le chaleureux accueil qu'a reçu le n.g.c.c. *John A. Macdonald* au port d'Halifax, après son historique voyage de deux mois à travers le passage du Nord-Ouest, a marqué, en novembre dernier, la fin d'une formidable aventure qui pourrait avoir des répercussions profondes sur le développement futur de l'Arctique canadien.

Le ministre des Transports, M. Don Jamieson, et certains hauts fonctionnaires du ministère étaient sur place pour féliciter le capitaine Paul Fournier et son équipage. Le *John A. Macdonald* a accompagné le pétrolier américain *Manhattan* depuis le début de son voyage jusqu'à son retour.

Le pétrolier a navigué à travers le passage du Nord-Ouest jusqu'en Alaska, aller-retour, afin d'évaluer les dangers et d'établir par une multitude d'essais les dimensions et la puissance nécessaires aux navires destinés à se rendre régulièrement aux riches champs pétrolifères d'Alaska.

Le voyage du pétrolier de 150,000 tonnes a été conçu et effectué par la compagnie Humble Oil pour le compte d'un consortium comprenant les compagnies Atlantic Richfield et British Petroleum. Le ministère des Transports du Canada et la Garde côtière des États-Unis ont apporté aide et soutien.

Le voyage vers l'ouest a été certainement, de toutes les expéditions arctiques, celui qui a fait l'objet de la plus grande publicité. Le *John A. Macdonald* transportait des correspondants de la presse et de la radio ainsi que des équipes de la télévision. Le *Manhattan* et les navires de la garde côtière des États-Unis transportaient des journalistes de tous les moyens importants d'information des États-Unis.

La glace était épaisse et la pression immense à Viscount Melville Sound. Le brise-glace américain *Northwind* n'a pu continuer. De son côté, le capitaine Fournier, du *John A. Macdonald* a dû intervenir à maintes reprises afin de dégager le gros pétrolier qui éprouvait de la difficulté dans les glaces.



Les membres d'équipage du *John A. Macdonald* retirent des glaces un hélicoptère en panne.

Crew of *John A. Macdonald* rescues crashed helicopter from ice.

Impressionnés par l'habileté exceptionnelle du capitaine Fournier, les journalistes à bord du *John A. Macdonald* ont adressé un message au premier ministre, le priant de faire en sorte que le capitaine fasse l'objet d'une citation particulière.

Dans le journal de bord du capitaine Fournier, on peut lire le rapport suivant relatif au sauvetage d'un hélicoptère qui s'était écrasé dans une zone où la glace atteignait par endroits une épaisseur de huit pieds et demi:

«Le *Manhattan* nous a demandé de l'aider à récupérer l'un de ses hélicoptères. Sur une distance de quatre milles, on s'est frayé un passage à travers une épaisse couche de glace vieille de plusieurs années (plus la glace est vieille plus elle est dure) et nous avons atteint l'hélicoptère qui gisait sur le flanc droit dans une grande flaque. Commandé de la passerelle, le *Macdonald* a exécuté sa manœuvre et est venu se ranger le long de l'hélicoptère. L'appareil, de même qu'un ponton et une roue qui s'étaient détachés, ont été hissés à bord en deux opérations et amarrés sur l'aire d'apontage pour hélicoptères.»

«Le *Macdonald* s'est ensuite dirigé vers le *Manhattan* et, après l'avoir accosté, on a transbordé l'épave de l'hélicoptère sur le pont principal arrière du pétrolier. Le *Macdonald* a fait alors machine arrière pour se garer dans la glace en attendant le *Manhattan*.»

Ray Stone, notre agent d'information à bord, ajoutait: «Tous ces froids communiqués ne disent rien de l'efficacité surprenante, de l'audace et des qualités de marin du capitaine Fournier et de ses hommes. Les chances de récupérer l'hélicoptère pouvant transporter neuf passagers et pesant plus de deux tonnes, paraissaient très minces. Pendant que le capitaine manœuvrait pour amener doucement l'arrière de son navire à l'endroit voulu, à quelques pieds seulement de l'hélicoptère, il semblait que le déplacement du navire allait sûrement disloquer la glace et faire couler l'appareil.»

«Les membres d'équipages du *Macdonald* sont descendus sur la glace d'où ils ont grimpé rapidement au sommet de l'hélicoptère pour y fixer un câble. Après une manœuvre coordonnée du navire et du



treuil, l'hélicoptère a été rapidement hissé sur le pont du *Macdonald*.

Le *Manhattan* a d'abord tenté de se frayer un passage vers l'ouest, à travers le redoutable détroit McClure qui a refusé de céder, conservant ainsi son record de n'avoir jamais été traversé d'est en ouest. En effet, la glace épaisse, vieille de plusieurs années, qui exerçait une pression considérable a arrêté le lourd pétrolier et même le *Macdonald* ne parvenait pas à diminuer la pression.

Le pétrolier s'est vu obligé de couper toutes ses installations nécessitant de l'énergie afin que cette dernière puisse être intégralement consacrée aux propulseurs. Le pétrolier a ainsi réussi à s'échapper de son étau de glace, s'est détourné du terrible détroit McClure et s'est dirigé vers la route relativement facile du détroit Prince-de-Galles.

Les deux navires ont atteint le port de Sachs, sur la côte occidentale des Îles Banks, le 16 septembre, soit 17 jours après s'être rencontrés dans le détroit de Davis.

Le voyage s'est poursuivi alors jusqu'à la baie Prudhoe en Alaska où se trouvent les champs pétrolifères et enfin jusqu'à Pointe Barrow.

Le voyage de retour était moins pressé. Ceci a permis au *Manhattan* d'effectuer des essais plus approfondis sur la glace. À l'aide de 300 détecteurs et d'autre matériel d'essai, le pétrolier a rassemblé une énorme quantité de données qui seront analysées par un ordinateur.

Lors du voyage de retour, les deux navires ont été rejoints par le brise-glace *Staten Island* de la Garde côtière des États-Unis. Les résultats de l'expédition restent à déterminer. Ils sont toutefois susceptibles d'avoir une énorme répercussion sur le développement du nord canadien où abondent des richesses en pétrole et autres minéraux.

Le *Macdonald* a joué un rôle historique en rendant possible le recueil des données et, comme l'a déclaré Stanley B. Haas, responsable du programme d'essais du *Manhattan*.

«Je ne crois pas, comme vous avez pu vous en rendre compte, que notre navire aurait pu se frayer une route dans le passage du Nord-Ouest sans l'aide du *John A. Macdonald* aux endroits critiques. Il ne fait pas de doute que nous aurions passé beaucoup plus de temps ou que nous serions très certainement restés beaucoup plus long-



Le ministre Don Jamieson, des Transports, et autres hauts fonctionnaires du ministère s'entretenaient avec les représentants de la presse à bord du *John A. Macdonald*. De gauche à droite, on remarque, M. Stan Haas, de la compagnie Humble Oil; le sous-ministre adjoint à la marine, M. Gordon Stead; le ministre; le capitaine Paul Fournier; et le représentant canadien à bord du *Manhattan* durant le voyage, le capitaine Tom Pullen.

Transport Minister Don Jamieson and senior officials meet the press aboard CCGS *John A. Macdonald* to discuss the voyage and its implications. Left to right are Stan Haas of Humble Oil, Assistant Deputy Minister, Marine Gordon Stead, the Minister, Captain Paul Fournier, and Captain Tom Pullen, who was Canadian representative aboard the *Manhattan*.

temps dans certains de ces bancs de glace sans l'aide compétente du *John A. Macdonald* et du capitaine Fournier. Nous croyons cependant que le *Manhattan* a fait preuve d'aptitudes de manœuvre extraordinaires dans le bris de la glace.»

En outre, durant tout le voyage, les services de la Direction de la météorologie ont été d'un grand secours grâce à l'avion qui effectuait une reconnaissance continue de la glace et informait le convoi des obstacles sur sa route.

## Weather Services Save Lives

A letter of appreciation from J. R. Arnold of the British Columbia Safety Council to the Minister of Transport tells how once again in 1969 no lives were lost as a result of weather during the Summer boating season in the Lower Gulf area. Mr. Arnold attributes this to use by the boating public of the Small Craft Weather Reports put out by A. P. Gibb and his staff of the Regional Meteorological Branch.

In 1966, the Regional Meteorological Office, at the suggestion of, and in cooperation with the Broadcast News Service and radio stations of the B.C. Safety Council, established what are known as "Small Craft Present Weather Condition Reports". Stations carrying the reports are listed in Safety Council bulletins showing times of broadcasts. Bulletins are circulated in Spring to all yacht clubs, power squadrons and other boating organizations as well as to marinas and marine filling stations.

The Weather Reports include wind velocity, condition of sea, visibility, and where a drastic change is indicated, a dubbed-in forecast.

The startling impact of these reports on mortality figures is seen from the records. In 1965 thirty-three boaters drowned in the Lower Gulf because they took their vessels from an area of good weather into an area of bad weather. In 1966, the first year Reports were put out, three lives and one small boat were sacrificed to weather. In 1967, 1968 and 1969 *no lives and no boats* were lost because of weather.

The Reports are used by 80,000 small boaters in the Lower Gulf Area and Mr. Arnold says that users are vociferous in their praise of the service, which is under continual review by the Regional Meteorological Branch to determine ways of improving it still further.

# Le programme d'assurance de soins médicaux

par le Dr David Stewart  
du ministère de la Santé nationale et du Bien-être social

*Quelque 14 millions de Canadiens participent déjà aux régimes provinciaux d'assurance médicale et l'on s'attend à ce que presque toute la population canadienne participe au programme dès 1970. Nous avons demandé au Dr Stewart, agent principal des évaluations médicales, à la Direction de l'assurance médicale du ministère de la Santé nationale et du Bien-être social, de bien vouloir nous fournir des précisions sur la nature du programme d'assurance de soins médicaux et sur sa signification pour tous.*

Lorsque l'honorable Lester B. Pearson a annoncé l'intention de son gouvernement de mettre sur pied le programme d'assurance médicale, en 1965, il a précisé que l'objectif du programme n'était pas d'englober d'un seul coup tout le domaine des services de santé personnels. La première étape du programme allait consister à englober les services fournis par les médecins et chirurgiens, étant donné que les médecins fournissent plus de services personnels de santé aux citoyens du Canada que tous les autres groupes de praticiens privés dans le domaine de la santé. Le premier ministre a précisé, cependant, que le gouvernement fédéral était disposé à inclure plus tard, dans son programme, les services personnels de santé autres que les services des médecins. De fait, la Loi sur les soins médicaux comprend une disposition en vertu de laquelle les autres services de santé peuvent être ajoutés au programme si le gouvernement fédéral juge la chose souhaitable. Certains services chirurgicaux-dentaires rendus à l'hôpital par les chirurgiens-dentistes ont déjà été inclus dans le programme aux termes de cette disposition. Cependant, rien dans la Loi sur les soins médicaux n'empêche une province participante d'inclure elle-même des services qu'elle juge souhaitables, et c'est pourquoi certains régimes provinciaux d'assurance médicale mettent à la disposition des citoyens de la province des soins additionnels qui, il va sans dire, ne modifient en rien la contribution financière fédérale.

La Loi sur les soins médicaux autorise le gouvernement fédéral à verser à chaque province participante, après le 1er juillet 1968, une contribution égale à 50 p. 100 du coût national par tête, de tous les services assurés de toutes les provinces participantes, multiplié par la moyenne du nombre des personnes assurées dans la province. Cette formule de partage des coûts est de nature à favoriser l'économie dans l'administration des régimes provinciaux d'assurance médicale et à fournir une aide plus marquée aux provinces qui ont un revenu plus faible que les autres. Il s'agit d'habitude des provinces moins favorisées, qui, autrement, éprouveraient de grandes difficultés à assurer les services de santé dont ont besoin leurs habitants. Pour bénéficier de la contribution fédérale, le régime provincial d'assurance médicale doit répondre aux quatre critères suivants:

(1) Le régime doit fournir une *couverture complète* en ce qui touche tous les services médicaux essentiels que rendent les médecins ou les chirurgiens. Il ne peut y avoir de limite monétaire ou d'exclusion pour les assurés, à moins qu'il ne s'agisse de services non essentiels du point de vue médical. La portée des prestations du programme fédéral comprend non seulement les services qui sont traditionnellement couverts, à un degré plus ou moins considérable, par l'industrie privée de l'assurance médicale, mais aussi les traitements

curatifs et préventifs qui sont traditionnellement couverts par le secteur public de la province, comme, par exemple, les soins médicaux administrés aux malades dans les sanatoriums et les hôpitaux psychiatriques et les traitements préventifs accordés par les médecins des organismes publics de santé.

(2) Le régime doit être *universel* en ce sens qu'il doit admettre aux services assurés, à titre égal, tous les résidents de la province qui y sont admissibles, ce qui veut dire non moins de 90 p. 100 des personnes admissibles au début, et non moins de 95 p. 100 après le 1er avril 1971. Cette universalité garantit à tous les résidents de la province l'admissibilité au régime, élimine toute prime discriminatoire en raison de la santé, de l'âge, de la non-participation à un groupe ou en raison d'autres facteurs, et permet à la province de réaliser le coût par tête le moins élevé en ayant un groupe très vaste d'assurés qui comprend à la fois les personnes qui sont considérées de bons ou de mauvais risques par l'industrie privée de l'assurance-maladie. Si la province choisit un régime à base de primes, le régime peut alors comprendre une indemnisation complète ou partielle pour la catégorie des personnes à faible revenu. Cette disposition revêt une importance capitale pour les personnes âgées et les malades chroniques qui sont économiquement désavantagés. Vu que les conditions d'admissibilité varient considérablement d'une province à l'autre, on a laissé à la province le choix de déterminer si ses habitants doivent être assurés sur une base facultative ou obligatoire. La loi fédérale n'interdit pas d'exiger certains frais de consommation au moment où les services sont rendus pourvu que ces frais, soit à cause de leur niveau, soit à cause de la façon dont ils sont employés, n'entravent ni n'empêchent l'accès raisonnable aux soins médicaux essentiels, surtout en ce qui touche les groupes à faible revenu.

(3) Le régime doit garantir la *transférabilité* des prestations advenant que le participant soit temporairement absent de sa province, dans un autre pays, ou advenant qu'il élise domicile dans une autre province, pourvu qu'il paye les primes exigées des autres résidents de la province. Certaines provinces établissent une distinction entre la situation où un participant au régime tombe malade alors qu'il est absent de sa province et la situation où un participant se rend délibérément dans une autre province ou ailleurs pour aller y chercher des services assurés qu'il peut facilement obtenir dans sa propre province. Lorsqu'un assuré déménage dans une autre province participante, la première province où il était assuré doit fournir les prestations d'assurance médicale (à condition que les primes exigées aient été payées)



au cours de toute période d'attente imposée par le régime d'assurance médicale de la seconde province. Aucune province participante ne peut imposer une période d'attente de plus de trois mois avant qu'un nouveau résident ne soit admissible à être couvert par les prestations du régime provincial. La couverture du régime d'assurance médicale n'a aucun rapport avec l'assurance-groupe des employés. Un participant au régime demeure donc couvert par l'assurance médicale lorsqu'il change d'emploi ou de domicile ou lorsqu'il prend sa retraite.

- (4) Le régime provincial d'assurance médicale doit être administré sans but lucratif par une autorité publique qui doit rendre compte de ses opérations financières au gouvernement de la province intéressée.

Grâce à ces quatre critères, chaque province jouit d'une souplesse considérable pour établir les arrangements administratifs en vue de l'exploitation de son régime d'assurance médicale, choisir le mode de financement de son régime (savoir, primes, taxe de vente, autres revenus provinciaux ou une combinaison de ces divers moyens), déterminer si ses résidents seront couverts par le régime sur une base facultative ou obligatoire et décider si elle doit intégrer à son régime des services autres que ceux du régime fédéral. Il n'en reste pas moins, en dépit de variations marquées entre les divers régimes provinciaux dans le cadre général du régime fédéral, que ces régimes auront de nombreux traits en commun.

La loi sur les soins médicaux exige que le gouvernement fédéral examine de nouveau les dispositions financières de la Loi vers la fin des cinq premières années en ce qui a trait aux contributions payables par le Canada aux provinces, «en vue de formuler des propositions de changement de ces dispositions qui semblent alors nécessaires ou désirables en ce qui concerne le montant et le mode de paiement,—que ce soit au moyen du transfert ou de l'attribution par le Canada de certains revenus fiscaux expressément désignés, et le versement par le Canada de paiements de péréquation et d'autres ajustements fiscaux au lieu des contributions qui seraient autrement payables... ou de toute autre manière.» Le rôle du gouvernement fédéral dans ce programme d'assurance médicale ne se termine pas au 31 mars 1973. Certaines modifications peuvent être apportées aux arrangements financiers après cette date.

### Deux questions courantes

On demande souvent pourquoi les régimes provinciaux d'assurance médicale ne payent qu'un pourcentage des honoraires du médecin.

Chaque régime provincial paye le médecin selon un tarif qui, sur la base de l'expérience passée dans le secteur public et privé, sera acceptable à la plupart des médecins lorsqu'il s'agit d'un paiement d'assurance comportant une seule facturation. Il y a lieu de signaler que tous les barèmes actuels d'honoraires de médecins reflètent encore la situation qui existait par le passé lorsque tous les médecins avaient une quantité considérable de comptes irrécouvrables. Tous les régimes provinciaux exigent que le médecin, s'il a l'intention de faire payer à son client un montant supérieur au montant réglementaire du régime provincial, en prévienne son client; certaines provinces exigent que le médecin donne cet avis par écrit à son client et qu'il informe le régime

provincial du montant en question. Cela permet au client de discuter de la chose avec son médecin ou de faire tout simplement d'autres arrangements.

Certains régimes d'assurance médicale privés accordaient une couverture plus complète à leurs participants mais, en revanche, ces mêmes régimes prévoyaient des montants déductibles, des paiements de coassurance et d'autres restrictions semblables. Le Régime d'assurance collective chirurgicale-médicale, par exemple, comportait une gamme de prestations tout à fait différentes, et pour cette raison il est extrêmement difficile d'établir une juste comparaison entre les prestations fondamentales de ce Régime et celles des nouveaux régimes provinciaux à base de primes, sans tenir compte du fait que le Régime d'assurance collective chirurgicale-médicale prévoyait un montant déductible annuel de 25 dollars par personne et de 50 dollars par famille et que la personne devait payer 20 p. 100 des frais additionnels. En outre, le même régime avait fixé un plafond aux prestations payables. Les nouveaux régimes provinciaux, par contre, garantissent la couverture complète sans déductibilité (comme nous l'avons indiqué plus haut dans l'exposé des quatre critères) et sans fixer de plafond aux prestations payables.

Dans les cas où les participants du Régime d'assurance collective chirurgicale-médicale ont la possibilité d'être couverts, en ce qui touche les services professionnels de santé, par un régime provincial d'assurance médicale faisant partie du programme fédéral d'assurance médicale, la ligne de conduite du Régime d'assurance collective chirurgicale-médicale est de retirer à ses participants la couverture à l'égard de ces services, tout en leur fournissant une couverture additionnelle avec une réduction considérable des taux. Ainsi les deux régimes se complètent l'un l'autre.

La question du partage, par le gouvernement fédéral en tant qu'employeur, du coût des primes que les fonctionnaires et retraités fédéraux doivent verser aux régimes provinciaux d'assurance médicale fait encore l'objet de délibérations, et il semble probable que l'on en arrivera à une solution satisfaisante.

### La Direction de l'assurance médicale

Il serait bon de signaler que le gouvernement fédéral lui-même n'exploitera pas un régime d'assurance médicale et ne vendra pas d'assurance médicale aux termes de son programme d'assurance médicale. Le gouvernement fédéral n'a donc pas besoin d'un personnel considérable pour s'occuper de ce programme. La Direction de l'assurance médicale comprend présentement un noyau de spécialistes qui sont chargés d'appliquer la Loi sur les soins médicaux, de fournir les services de consultation nécessaires aux provinces et de faire les recherches qui s'imposent.

# MEDICARE



Dr. David Stewart

by Dr. David Stewart  
Department of National Health and Welfare

*Some 14 million Canadians already are insured under provincial medicare insurance plans and this year virtually the entire population is expected to be covered. We asked Dr. Stewart, Principal medical evaluation officer of the medical care directorate, department of National Health and Welfare, to tell us something about the development of medicare and what it means to all of us.*

When Mr. Pearson announced his government's intention to implement the Medical Care Program in 1965, he made it clear that the program was not intended to cover the entire personal health care field in a single step. The first stage would be to cover comprehensively the services of physicians and surgeons, since medical practitioners render more personal health care services to Canadians than all other types of independent health practitioners. He confirmed, however, that the federal government would be prepared to consider later the inclusion of other personal health services beyond the initial minimum. In fact, the Medical Care Act contains a provision whereby other health services may be added to the program when this is considered desirable by the federal government. Certain surgical-dental services performed in hospitals by dental surgeons have been included in the program under this provision. There is nothing, however, in the Medical Care Act to prevent a participating province from providing on its own any additional benefits it considers desirable and a number of provincial plans provide additional benefits which, of course, do not affect the federal financial contribution.

The Medical Care Act authorizes the federal government to contribute to each participating province after July 1, 1968 at a level of fifty percent of the national per capita cost of insured services in all participating provinces, multiplies by the average number of insured persons in the province. This cost-sharing formula should encourage economy in the operation of provincial plans and also provide relatively greater assistance to those provinces with lower than average national costs. These are usually the provinces which are economically less favoured and would otherwise have great difficulty in meeting the health care needs of their citizens. The minimum criteria which a provincial medical care plan must meet in order to benefit from federal financial support are the so-called "Four Points". These are:-

- (1) *Comprehensive coverage* must be provided for all medically required services rendered by a physician or surgeon. There can be no dollar limit or exclusions except on the grounds that the services were not medically required. The federal program does not only include in the benefit coverage those services which have been traditionally covered to a greater or lesser extent by the health insurance industry but also includes preventive and curative services which have been traditionally covered through the public sector in each province, for example, the medical care of patients in mental and tuberculosis hospitals and those services of a preventive nature provided to individuals by physicians in public health agencies.
- (2) The plan must be *universally available* to all eligible residents on equal terms and conditions and covering at least 90% of the total eligible provincial population at the outset of the program and at least 95% after April 1, 1971. This ensures access to coverage by all residents, prevents premium discrimination on account of previous health, age, non-membership in a group or other considerations, and enables the lowest per capita costs to be achieved through having a broad insurance group which includes both those who would be regarded as good risks and bad risks by the health insurance industry. If a premium system is selected, subsidization in whole or part for low-income groups is permitted. This provision is of special importance to the elderly and those with chronic illness who are economically handicapped. Due to the fact that conditions vary considerably in each province, it has been left up to the individual province to determine whether its residents should be insured on a voluntary or compulsory basis. Utilization charges at the time of service are not excluded by the federal legislation provided they are not of such a size and applied in such a way as to impede or preclude reasonable access to necessary medical care, particularly for low income groups.



- (3) The plan must provide *portability* of benefit coverage when the insured resident is temporarily absent from the province anywhere in the world and when moving residence to another participating province, providing any required premiums applicable to other residents of the province are paid. Some provinces distinguish between the situation where a resident takes ill while absent from his province and the situation where a resident deliberately goes to another province or elsewhere for insured services which are readily available within his own province. When an insured resident moves to another participating province, the first province must provide medical care benefits, if any required premiums have been paid, during any waiting period imposed by the medical care insurance plan of the second province. No participating province can impose a waiting period in excess of three months before a new resident is entitled to obtain benefit coverage. Coverage will be in no way related to employment insurance groups. Consequently coverage is not lost when an individual changes jobs, retires or changes his residence.
- (4) The provincial medical care insurance plan must be administered on a non-profit basis by a public authority which is accountable to the provincial government for its financial transactions.

The above four criteria leave each province with substantial flexibility in determining the administrative arrangements for the operation of its medical care insurance plan, in choosing the way in which its plan will be financed (e.g. through premiums, sales tax, other provincial revenues or by a combination of methods) in determining whether its residents will be covered on a compulsory or voluntary basis and in deciding whether to include additional insured services to those of the national program. However, although the different provincial plans will vary considerably, within the broad objectives of the federal program, they will be found to have many common features.

The Medical Care Act requires the federal government to review the financial provisions of the Act towards the end of the first five years, with respect to the contributions payable by Canada to the provinces "with a view to formulating proposals for any changes therein that appear to be necessary or desirable with respect to the amount and manner of payment, whether by the transfer or allocation of specified tax revenues by Canada and the making of equalization payments and other fiscal adjustments by Canada in lieu of the contributions that would otherwise be payable ... or in any other manner." The role of the federal government in this program does not cease on March 31, 1973, although there may be changes in the financial arrangements after that date.

### Two Common Questions

It is frequently asked why the provincial medical care insurance plans only pay a percentage of the doctor's regular fee.

Each provincial plan makes payment at a rate which past experience with both private and public arrangements indicates will be acceptable to the majority of doctors when payment is assured and only a single billing is required. It should be noted that all currently existing medical fee schedules still reflect the situation which prevailed when all doctors experienced a fair proportion of uncollectable accounts. All provincial plans require doctors to notify patients in advance if they intend to charge more than will be paid by the provincial plan and in some provinces this is required in writing and the plan must be informed of the amount involved. This gives the patient a chance to either remonstrate with the doctor or make other arrangements.

While some private insurance plans ostensibly provided more comprehensive coverage they were frequently subject to deductibles, co-insurance payments and other limitations. For example, the Group Surgical-Medical Insurance Plan (GSMIP) had an entirely different set of benefits and it is very difficult to compare the relative benefits of the basic comprehensive GSMIP with the benefit coverage of the new provincial plans which are financed by premiums without taking into consideration the fact that the GSMIP was subject to deductibles of \$25.00 per person and \$50.00 per family unit per year and the insured person also had to pay 20% of any additional costs. Furthermore, an upper limit was placed on the benefits payable. On the other hand, the new provincial plans provide first dollar coverage as described above in connection with the "Four Points" without any upper limits on the benefits payable.

When subscribers to the GSMIP plan are able to obtain coverage for professional health services by a provincial medical care insurance plan included in the federal Medical Care Program, the general pattern has been for GSMIP to withdraw coverage of these services while making supplementary coverage available at markedly reduced rates, thus making the two plans complementary.

The question of sharing by the federal government as the employer in the cost of premiums payable by federal public servants and pensioners to provincial medical care insurance plans is still the subject of discussion and it seems likely that a satisfactory conclusion will be reached.

### The Medical Care Directorate

It should be noted that the federal government will not be operating a medical care insurance plan or selling medical care insurance under this program. Accordingly, there is no requirement for the federal government to appoint a large staff. The Medical Care Directorate at present consists of a small expert nucleus to carry out the administrative requirements of the federal legislation, to supply consultant services to the provinces and to undertake research.



## Volunteers the life blood of community activities



### D.O.T. Personnel donating their expertise

In these days when volunteers are the life blood of all community activities, Department of Transport personnel are to be found actively engaged in many areas of volunteer community work in all parts of Canada.

No organization can exist without these volunteers and all the time there is a search for new ways of interesting the people who might be able to spare a few hours each week, or a day or two each month, to do something for their fellowman. All this volunteer service is essential—no item or job is more important than the other.

D.O.T. employees who work with volunteer organizations are people who are donating their expertise to assist in community affairs. In their every day work they are

familiar with people to people communications and they find that this experience pays dividends in the community activities in which they are involved.

The activities in which D.O.T. personnel are involved may range from the chairmanship of a United Appeal Fund to a reeve of a township council, or from work with underprivileged children to the promotion of junior hockey.

Maurice Baribeau, RDAS Montreal, late last year accepted chairmanship of the Federated Charities Appeal of Greater Montreal, while Glen Stewart, Executive Assistant Marine, is departmental organizer for this year's United Appeal in Ottawa and Hull.

Moving from Ottawa to Newfoundland,

we find that the departmental accountant with the St. John's District Marine Agency, W.J. Robbins, is chairman of Newfoundland Provincial Committee of the Air Cadet League of Canada. Mr. Robbins, who served as a pilot in the Royal Air Force from 1942 to 1946 in Canada, Britain and India, is a past president of Sponsoring Committee No. 515 (North Atlantic) Squadron of the Royal Canadian Air Cadets; also past president of No. 105 (North Atlantic) Wing, RCAF Association. He has a son, Lieut. Keith Robbins, who is now undergoing pilot training in the Canadian Armed Forces at Gimli, Manitoba.

At our request RDMS, Maritimes, made a survey in the various bases and locations



within his Region and found that many Department personnel were engaged in community activities.

For instance, the Regional Director of Marine Services in the Maritimes, F.M. Weston, is himself prominent in community affairs. He is chairman of the Federal Services Division of the Halifax-Dartmouth Area of United Appeal and is Commander of Halifax Power Squadron of Canadian Power Squadrons, which have as their theme "Boating Safety Through Education."

Captain G.J.M. Williams, District Manager, Saint John Marine Services Base is active in many areas of community service. He is a member of the Board of Directors of the Canadian Mental Health Association of Saint John; director of the Saint John Chapter of Cystic Fibrosis; a member of the Society for Preservation and Encouragement of Barbershop Singing in America and of several other clubs and organizations.

T.J. Stephen, District Engineer of Saint John Marine Services is president of the Saint John Canadian Lebanon Association; secretary-treasurer of the Federal Institute of Management and coach of Saint John Minor League Football.

Louis E. Murphy, District Personnel Administrator of Saint John Marine Services Base is working in a variety of community affairs ranging from membership in the council of the amalgamated Cities of Saint John, City of Lancaster and Parish of Simonds to catechism teacher and lector at Masses in Saint Rose Church, Saint John West.

He is chairman of the Committee of Council which was appointed to inquire into the housing shortage in the city of Saint John and is Director of Social Services Council of Greater Saint John.

### Citizen of the Year

When we inquired at DMA, Parry Sound, we discovered that D.O.T. personnel there were well-known in many community activities. Mrs. Josephine T. Martin, the DMA's stenographer, who lives in Foley Township, seven miles from Parry Sound, served on the Foley Township Council for four years and was an acting reeve. Last year she was chairman of the Parry Sound and Area Winter Carnival. She has been a director of the Chamber of Commerce for three years, and has been nominated president for 1970. In March, 1969, she received the Citizen of the Year award from Foley Township for her work in the community.

Mac Childerhose, District Engineer at Parry Sound, is a director of the Parry

Sound Hockey Association, which looks after all Parry Sound hockey, from Minor Squirt to Junior. Mac is active as an alumnus of Clarkson University, Northern New York State, and has helped to secure hockey scholarships for several boys.

Another man at Parry Sound who is actively engaged in hockey is Roger Morel of the Stores Section. Roger coaches a PeeWee team in Minor Hockey and is at present on the McDougall Township Council. He lives in McDougall, approximately two miles from Parry Sound, and has been a director of the Credit Union since its beginning and treasurer for 12 years.

Don Cameron of the Parry Sound Accounting Section has been an active member of the Canadian Legion for many years, and has served in an executive position for most of the time. He was president in 1962-63 and treasurer from 1966 to the present time. In an active capacity he has worked on many committees, such as the committee which sponsors the Air Cadets, Track and Field Club and many others.

### Underprivileged children

Glen Campbell of Parry Sound S.O.L. Section is an active member of the Kinsmen Club and a past president. He has worked on many committees involved in work for underprivileged children, retarded

children, minor softball leagues, and serves on the credit committee for the Credit Unit.

District Marine Agent F.K. McKean is himself a man who is always in line when the community has a new enterprise, such as a Winter Carnival, Centennial Year and community parades. He served on the committee which first started the Parry Sound Area Winter Carnival and was co-chairman of the Parry Sound Centennial Committee. For his work in the latter he received the Centennial Medal. Under the byline "Dick McKean", he writes the "North Star" column in the local newspaper and in this he is able to promote many community activities.

At Moncton, N.B., the Regional Supply Officer, H.B. Findlay, is now serving his second two-year term as Mayor of the Village of Riverview Heights, N.B.

At the Canadian Coast Guard College at Sydney, N.S., the student cadet officers are doing their utmost during their studies to support the local United Appeal campaign. In this year's campaign they were the first group in the area to exceed their quota.

Many D.O.T. employees in other areas are involved in community activities, especially in the work with young people and it is hoped that we may have something about these people at a later date.



WINNING TOUCH—D.O.T. headquarters won the RA inter-departmental football league championship in competition with 11 other departments. Here Deputy Minister O. G. Stoner passes the ball to the team with \$180 R. A. cheque attached for purchase of team jackets. The team was organized two seasons ago by Ted Davis of the Construction, Engineering and Architectural Branch.

UNE PASSE À NE PAS MANQUER—L'équipe de football du ministère des Transports a remporté le championnat de la saison. Onze autres ministères comptaient des équipes dans la Ligue de l'Association récréative des employés de la fonction publique. Le sous-ministre O. G. Stoner s'apprête à lancer aux joueurs un ballon auquel est attaché un chèque de \$180 versé à l'équipe gagnante par l'Association récréative. Ce montant servira à l'achat de gilets pour les joueurs.



# Plusieurs de nos employés s'adonnent au bénévolat

A notre époque où le bénévolat occupe une place aussi importante dans la vie communautaire, il est réconfortant de trouver un si grand nombre d'employés du ministère des Transports qui s'occupent activement, d'une façon ou d'une autre, d'organisations bénévoles dans toutes les régions du Canada.

Aucune organisation ne peut survivre sans bénévoles et l'on cherche sans cesse à trouver les moyens d'attirer les personnes qui sont en mesure de consacrer quelques heures par semaine, ou une journée ou deux par mois, au service de leur prochain.

Les employés du ministère des Transports qui remplissent des fonctions au sein d'associations bénévoles sont des gens qui mettent leur expérience au service des affaires sociales. Dans leur travail quotidien, ils acquièrent de l'entregent et trouvent que cette expérience leur est d'une grande utilité lorsqu'ils s'occupent d'œuvres sociales.

Les organismes dont s'occupent les membres du personnel du ministère peuvent varier du poste de président d'une fédération d'œuvres, à celui de maire d'une municipalité, ou de l'aide aux enfants pauvres à la promotion du hockey amateur pour enfants.

Le directeur régional des Services de l'Air, à Montréal, M. Maurice Baribeau, a accepté, vers la fin de l'an dernier, la présidence de la Fédération des œuvres de charité de la région de Montréal, tandis que M. Glen Stewart, adjoint exécutif (marine), a accepté d'être l'organisateur, pour le ministère, de la campagne de la Fédération des œuvres pour Ottawa et Hull.

En passant d'Ottawa à Terre-Neuve, on découvre que le comptable du ministère auprès de l'Agence régionale de la marine de Saint-Jean, M. W.J. Robbins, est le président du Comité provincial de Terre-Neuve de la Ligue des cadets de l'Air du Canada. M. Robbins, qui a été pilote de la RAF, de 1942 à 1946, au Canada, en Grande-Bretagne et en Inde, est un ancien président du Comité d'honneur de l'escadrille no 515 (Atlantique-Nord) des cadets de l'Air du Canada; il fut également président de l'escadre no 105 (Atlantique-Nord) de l'Association de l'ARC. Son fils, le lieutenant Keith Robbins, reçoit actuellement son entraînement de pilote à la base des Forces armées canadiennes de Gimli (Man.).

## Personnalité de l'année

En nous renseignant auprès de l'Agence régionale de la marine, à Parry Sound, nous avons découvert que le personnel du ministère à cet endroit s'occupe de diverses œuvres sociales. Mme Josephine T. Martin,

sténographe à l'Agence de la marine, qui demeure dans le canton de Foley, à sept milles de Parry Sound, est membre du conseil cantonal de Foley depuis quatre ans et a rempli les fonctions de maire suppléant. L'an dernier, elle était présidente du comité d'organisation du Festival d'hiver de la région de Parry Sound. Elle a été directrice de la Chambre de commerce pendant trois ans et nommée à la présidence pour l'année 1970. En mars 1969, elle a reçu le titre de personnalité de l'année qui lui a été décerné par le canton de Foley en reconnaissance des services qu'elle a rendus au canton.

M. Mac Childerhose, ingénieur régional à Parry Sound, est directeur de l'Association de hockey de Parry Sound, qui s'occupe de toutes les équipes de hockey de l'endroit, des équipes d'enfants à celles de la catégorie junior. M. Childerhose s'occupe activement de l'association des anciens de l'université Clarkson, dans le nord de l'État de New York, et a aidé plusieurs jeunes joueurs de hockey à y obtenir des bourses d'étude.

M. Roger Morel, de la section des magasins, est un autre qui s'occupe activement de hockey. M. Morel est l'instructeur d'une équipe de garçonnets et fait actuellement partie du conseil cantonal de McDougall. Il demeure à McDougall, soit à environ deux milles de Parry Sound, et est directeur

de la Caisse populaire depuis son établissement, et trésorier depuis 12 ans.

M. Don Cameron, de la section de comptabilité de Parry Sound, est membre actif de la Légion canadienne depuis plusieurs années, et a rempli des fonctions d'administrateur la plus grande partie du temps. Il a été président en 1962-1963 et trésorier de 1966 à aujourd'hui. Il a été membre actif de plusieurs comités, par exemple le comité qui parraine les Cadets de l'Air, de l'équipe d'athlétisme et de plusieurs autres organisations.

## Les enfants pauvres

M. Glen Campbell, de la section S.O.L. de Parry Sound, est un membre actif du club Kinsmen dont il a déjà été président. Il s'est occupé de plusieurs comités d'aide aux enfants pauvres, aux enfants mentalement désavantagés, d'équipes de softball, etc. Il fait partie du comité de crédit de la Caisse populaire.

L'agent régional de la marine, M. F.K. McKean, est un homme sur qui on peut toujours compter lorsqu'on lance une nouvelle activité comme le festival d'hiver, les cérémonies du Centenaire et les parades. Il a été membre du comité qui a établi le premier festival d'hiver de la région de

(suite à la page 25)



FÉDÉRATION DES ŒUVRES DE MONTRÉAL—M. Maurice Baribeau, directeur régional des Services de l'Air, à Montréal, dirige la campagne de 1970 de la Division de la fonction publique du Canada, des sociétés de la Couronne et des Forces Canadiennes. Il est secondé dans son travail par d'autres employés des Transports, dont, entre autres, de gauche à droite, MM. Henri Langlois, Léo Gagnon, M. Baribeau, J.-E. (Pete) Goulet et J. A. Logue McDonald

FEDERATED APPEAL OF GREATER MONTREAL—Maurice Baribeau, Regional Director, Air Services, Quebec, is 1970 campaign chairman of the Public Service of Canada, Crown Corporation and Armed Forces Division. Working with him are, from left, H. Langlois, L. Gagnon, M. Baribeau, J. E. Goulet and J. A. L. McDonald





**RETIRES AFTER 40 YEARS**—All branches at departmental headquarters were represented at the reception held in the Hunter Building, Ottawa, on Oct. 14 to extend good wishes to Miss Y. McClymont on her retirement from the department after 40 years' service. Here Miss McClymont, who was Personnel Administrator, Staffing, is being presented with one of the farewell gifts by C. I. (Scotty) McFarlane, Chief Personnel Administrator.



**FAREWELL FROM COLLEAGUES**—Mr. Knutsen, second from left, with, from left, Vic Currie, ex-WCB; D. Dewar, WTE, and George A. Scott, ADMA.

**VOEUX DES COLLÈGUES**—M. Knutsen, deuxième à gauche, accompagné des personnes suivantes, de gauche à droite, MM. Vic Currie, D. Dewar, et George A. Scott, sous-ministre adjoint.



**ELEVATOR OPERATOR RETIRES**—William (Bill) Robinson, a familiar figure to D.O.T. employees in Ottawa, retired recently after nine years' service with D.P.W., seven of them in the Hunter Building in Ottawa. At one time a farmer, then miner and lumberjack, Bill now goes to enjoy some well-earned leisure in his new home in Gatineau Mills.

**NOS BONS VOEUX L'ACCOMPAGNENT**—M. William (Bill) Robinson, vieille connaissance des employés du ministère des Transports, à Ottawa, a récemment pris sa retraite après neuf ans de service au ministère des Travaux publics, dont sept ont été passés à l'immeuble Hunter, à Ottawa. Ancien fermier, mineur et bûcheron, Bill va maintenant jouir d'un repos bien mérité à sa nouvelle maison de Gatineau.

**UNE CARRIÈRE BIEN REMPLIE**—Toutes les directions de l'Administration centrale du ministère étaient représentées à la réception donnée le 14 octobre à l'immeuble Hunter (Ottawa), pour dire «au revoir» à Mlle Y. McClymont, qui prenait sa retraite après quarante ans au service de la Fonction publique. Sur la photo, Mlle McClymont, qui occupait les fonctions d'administrateur du personnel (recrutement), reçoit de M. C. I. (Scotty) McFarlane, administrateur en chef du personnel, l'un des cadeaux d'adieu qui lui ont été offerts.

## M. George Knutsen

Un dîner d'adieu a été offert à Edmonton, en septembre 1969, à M. George Knutsen, ingénieur régional adjoint de la construction pour la région de l'Ouest. M. Knutsen a pris sa retraite après plus de 29 ans de service au ministère.

Plus de 70 amis, y compris le sous-ministre adjoint aux Services de l'Air, M. George A. Scott, ont assisté à ce dîner.

M. Knutsen est entré au service du ministère en 1940 et fut ingénieur résident au cours de la construction de plusieurs aéroports du sud de l'Alberta dans le cadre du Programme d'entraînement aérien du Commonwealth. Après la Seconde guerre mondiale, il fut ingénieur résident (APM) à Wrigley (T.N.-O.), et à Fort Simpson. Il continua d'exercer ces fonctions relativement à divers projets de ce qui est maintenant la région de l'Ouest jusqu'au milieu des années 50 alors qu'il fut nommé au poste d'ingénieur régional adjoint de la construction.

## George Knutsen

A farewell dinner was held in Edmonton in September last for George Knutsen, Assistant Regional Construction Engineer of the Western Region, who has retired after more than 29 years of service with the department.

More than 70 friends, including the ADMA, George A. Scott, attended the dinner.

# Two New Canadian Coast Guard Vessels Christened



The new vessels, CCGS *Provo Wallis* and *Bartlett*

Two new Canadian Coast Guard vessels, the *Provo Wallis* and the *Bartlett*, were officially christened at Marine Industries Limited, Sorel, on October 18, 1969.

Mrs. A. H. G. Storrs, wife of the Director of Marine Operations for the Department of Transport, sponsored the CCGS *Provo Wallis*, while Mrs. Florian Côté, wife of the Federal Member of Parliament for Richelieu, christened CCGS *Bartlett*. In attendance at the double christening ceremony were representatives of the various levels of government and of the shipping industry, along with senior officials of the department.

The *Provo Wallis* and *Bartlett*, supply and buoy vessels designed for operation in coastal waters, were built to replace vessels to be withdrawn from service because of age. Each vessel carries a crew of 37, including eight officers.

The *Provo Wallis* is named after Sir Provo William Parry Wallis, a native son of Nova Scotia whose distinguished career in the navy was climaxed, in 1877, by his appointment to the rank of Admiral of the Fleet. Born in Halifax in 1791, the son of a dockyard commissioner, he died in England in 1892.

CCGS *Bartlett* carries the name of the famous master mariner and Arctic explorer, Captain Robert Bartlett who took part in various expeditions to the Far North, including those by Peary and by Stefansson. Captain Bartlett was born in Brigus, Conception Bay, Newfoundland, on August 15, 1875. He died in New York City, April 28, 1946.

On behalf of the Department of Transport, Gordon W. Stead, Assistant Deputy Minister, Marine, expressed to Marine Industries Ltd., appreciation for "these two fine ships." To their officers and crews he said: "We wish them well in the work they will undertake as units of the Canadian Coast Guard."

(suite de la page 23)

Parry Sound et a été président associé du comité du Centenaire de Parry Sound. Ses travaux au service de ce comité lui ont valu la médaille du Centenaire. Il rédige la rubrique "North Star" dans le journal local, signant cette rubrique du nom de "Dick McKean", et il est ainsi en mesure de promouvoir plusieurs œuvres sociales.

L'Agent régional des approvisionnements, à Moncton (N.-B.), M. H.B. Findlay, a été réélu pour un deuxième mandat de deux ans au poste de maire du village de Riverview Heights (N.-B.).

Au Collège de la Garde côtière canadienne de Sydney (N.-É.), les élèves-officiers apportent tout l'appui possible à la campagne locale de la Fédération des œuvres. Cette année, leur groupe a été le premier de la région à dépasser son objectif.

Dans la région des Maritimes, nombre d'employés participent activement à la bonne marche de diverses œuvres.

Entre autres, le directeur régional des Services de la marine, M. F.M. Weston est président de la Division des services fédéraux dans la présente campagne de la Fédération des œuvres de la région Halifax-Darmouth. Il est également commandant de la "Halifax Power Squadron".

Le capitaine G.J.M. Williams, agent de district à la base de la marine de Saint-Jean,

Nouveau-Brunswick, est membre du conseil d'administration de l'Association canadienne de la santé mentale, directeur de la succursale de Saint-Jean de l'association chargée de faire la lutte à la fibrose kystique et membre de divers autres organismes de bien-être.

L'ingénieur régional à la base de Saint-Jean, M. T.J. Stephen, est président de l'Association canadienne du Liban à Saint-Jean. Il est également secrétaire-trésorier de la "Federal Institute of Management" et instructeur de la Ligue de football mineur de Saint-Jean.

L'administrateur du personnel à la même base, M. Louis E. Murphy, est membre du conseil des villes amalgamées de Saint-Jean, Lancaster et Simonds. Il est également professeur de catéchèse et lecteur aux messes à l'église Sainte-Rose, de Saint-Jean-Ouest.

Il préside aussi le comité désigné par le Conseil de ville pour étudier le problème de la pénurie de logements à Saint-Jean et est directeur du Conseil des services de bien-être de la région de Saint-Jean.

Plusieurs autres employés du ministère dans les diverses régions s'occupent également d'œuvres sociales, surtout de l'aide aux jeunes, et nous espérons avoir de leurs nouvelles dans un proche avenir.



# appointments

## Benoît Baribeau

Benoît Baribeau, formerly General Manager, Engineering, of Quebec Hydro-Electric Commission, was recently appointed General Manager of the New Montreal International Airport Project.

In his new position, Mr. Baribeau is responsible to the Minister and Deputy Minister of Transport for the planning, design, procurement and construction for the initial phase of the new airport. He is responsible also for liaison with provincial departments, and as chairman of the inter-department committee will coordinate the activities and responsibilities of the various federal departments and agencies.

Born in the Province of Quebec, Mr. Baribeau joined Quebec Hydro-Electric Commission in 1962 and was responsible for the design and execution of Hydro-Quebec's expansion program.

## M. Benoît Baribeau

L'ancien directeur général des services du génie auprès de l'Hydro-Québec, M. Benoît Baribeau, a été récemment nommé administrateur délégué du projet d'aménagement du nouvel aéroport international de Montréal.

À son nouveau poste, M. Baribeau est responsable auprès du ministre et au sous-ministre des Transports de la planification, de la conception, des achats et de la construction pour la phase initiale de l'aménagement du nouvel aéroport. Il est aussi chargé de la liaison avec les ministères provinciaux, et, à titre de président du comité interministériel, il coordonnera l'activité et les attributions des divers ministères et organismes fédéraux.

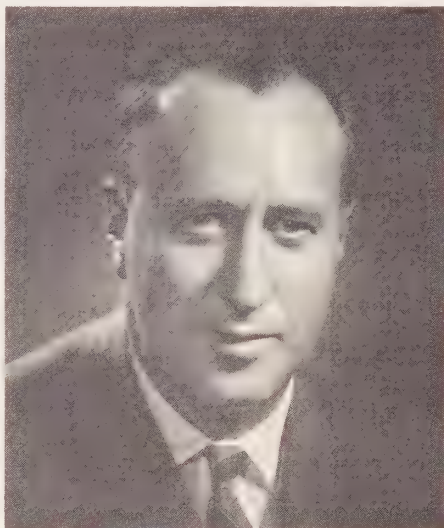
Né au Québec, M. Baribeau est entré au service de l'Hydro-Québec en 1962 et fut chargé de la conception et de l'exécution du programme d'expansion de cette société.

## D.G. MacKinnon

D.G. MacKinnon of the Mobile Support Services Division, Ottawa was appointed Executive Assistant to the Regional Director, Air Services, Western Region on October 14, 1969.

## M. D.G. MacKinnon

M. D.G. MacKinnon, de la Division des services de soutien mobile, à Ottawa, a été nommé adjoint exécutif du Directeur régional des Services de l'Air, région de l'Ouest, le 14 octobre 1969.



Benoît Baribeau



Alan C. Weaver

## Alan C. Weaver

Alan C. Weaver, formerly General Superintendent of Transportation for the Prairie Region of the Canadian National Railways, is now Director of Planning Analysis for the department.

Mr. Weaver's duties include a significant proportion of the transportation planning undertaken by the department's Transportation Policy and Research Branch.

A native of Toronto, he is a graduate in electrical engineering from McGill University. Following service in the RCAF during World War II and employment with Bell Telephone Company, he joined the CNR in 1948, and held various positions at Moncton, Montreal and Winnipeg.

## M. Alan C. Weaver

M. Alan C. Weaver, ancien surintendant des transports pour la région des Prairies aux chemins de fer Nationaux du Canada, vient d'être nommé directeur de l'analyse de la planification au ministère.

M. Weaver se chargera d'une importante partie des travaux de planification qu'assume la Direction de la politique, et des recherches en matière de transport du ministère.

Né à Toronto, M. Weaver est diplômé en génie électrique de l'Université McGill. Après avoir fait la guerre dans les rangs de l'Aviation royale du Canada, il a travaillé pour la compagnie de téléphone Bell puis, depuis 1948, pour le National-Canadien où il a occupé différents postes à Moncton, Montréal et Winnipeg.

## D. J. Laven

D.J. (Nic) Laven, a former negotiator with the Staff Relations Division of Treasury Board is now Director of Staff Relations, Department of Transport. Prior to joining the Federal Government in 1966, Mr. Laven had an extensive background in industrial relations in the electronics, steel and chemical industries.

A native of Scotland, Mr. Laven served for six years during the war with the British Merchant Navy. After the war he majored in philosophy and human relations at St. Thomas College, Surrey, England, and came to Canada in 1951.



D. J. Laven



Israel Akerman



William J. Campbell

## M. D. J. Laven

M. D.J. (Nic) Laven, ex-négociateur de la Division des relations de travail du Conseil du Trésor, est maintenant directeur des relations de travail au sein du ministère des Transports. Avant d'entrer au service du gouvernement fédéral, en 1966, M. Laven avait acquis une solide expérience dans les relations de travail dans les domaines de l'électronique, de l'acier et des produits chimiques.

Natif de l'Écosse, M. Laven a accompli six années de service de guerre dans la marine marchande britannique. Après la guerre, il obtint des diplômes en philosophie et en relations humaines au collège St. Thomas, de Surrey (Angleterre), et s'établit au Canada en 1951.

## H.C. Fisher

H.C. Fisher of the Mobile Support Services Division, Ottawa was appointed Regional Superintendent, Field and Mobile Services, Ontario Air Services Region on September 19, 1969.

## M. H.C. Fisher

M. H. C. Fisher, de la Division des services le soutien mobile, à Ottawa, a été nommé surintendant régional des Services locaux et mobiles de la région ontarienne des services de l'Air, le 29 septembre 1969.

## Israel Akerman

Israel Akerman was recently appointed Superintendent of Navigational Aids, Engineering, in the Telecommunications and Electronics Branch, Air Services, Ottawa.

Mr. Akerman holds both a Bachelor of Engineering and Master of Science in Engineering degrees. He joined the Public Service in 1957 and prior to assuming his new duties had been Superintendent of Radio Aids Construction in the Quebec Air Services Region for the past several years.

## M. Israel Akerman

M. Israel Akerman vient d'être nommé surintendant de la section technique des aides à la navigation, à la Direction des télécommunications et de l'électronique des Services de l'Air, à Ottawa.

M. Akerman, qui a un diplôme d'ingénieur et une maîtrise en génie, travaille pour la Fonction publique depuis 1957. Avant d'assumer ses nouvelles fonctions, il a pendant sept ans occupé le poste de surintendant de la construction des aides radio à la navigation à la région de Québec des Services de l'Air.

## William J. Campbell

William (Bill) J. Campbell was appointed Chief Personnel Administrator at Meteorological Branch Headquarters, Toronto on September 1, 1969. Mr. Campbell was a Senior Personnel Officer with the Ontario government between 1962 and 1969, serving successively in the Departments of Health and Education. A native of Toronto. Mr. Campbell obtained his BA degree at Waterloo Lutheran University in 1962 and is currently enrolled in the MBA program at York University.

## M. William J. Campbell

M. William (Bill) J. Campbell a été nommé administrateur en chef du personnel, à la Direction de la météorologie, à Toronto, le 1er septembre 1969. M. Campbell fut agent senior du personnel au service du gouvernement de l'Ontario, de 1962 à 1969; il a rempli ces fonctions aux ministères de la Santé et de l'Éducation, successivement. Né à Toronto, M. Campbell a reçu un diplôme de bachelier ès arts de l'Université Waterloo Lutheran en 1962; il suit actuellement un programme d'études pour la maîtrise en administration d'affaires, à l'Université York.



# Transport ALBUM des Transports



## CCGS Kenoki

The Canadian Coast Guard Ship *Kenoki* is a lighthouse supply and buoy vessel based at Prescott, Ont. The ship's name is Indian, meaning "long-legged crane" and is an apt title in view of the vessel's peculiar capabilities. Christened at Prescott on August 15, 1964, the vessel's "legs", or spuds as they are properly termed, can be lowered to the bottom in order that the vessel can remain stationary during construction projects where water is shallow and currents swift.

LENGTH: 109 feet  
BREADTH: 36 feet  
DRAFT: 6 feet  
POWER: Diesel 800 SHP  
FULL LOAD DISPLACEMENT: 438 tons

## Le n.g.c.c. Kenoki

Le navire de la Garde côtière canadienne, *Kenoki*, est un baliseur dont le port d'attache est Prescott (Ont.). Le mot indien *Kenoki* veut dire «grue à longues jambes», et vu les caractéristiques du navire, le nom est bien choisi. Il a été baptisé à Prescott, le 15 août 1964. Les «jambes» ou, plus exactement, les béquilles peuvent être abaissées et venir prendre appui sur le fond afin d'immobiliser le navire pendant les travaux de construction dans les endroits où l'eau est peu profonde et les courants rapides.

LONGUEUR: 109 pieds  
LARGEUR: 36 pieds  
TIRANT D'EAU: 6 pieds  
MOTEUR: Diesel de 800 chevaux à l'arbre  
DÉPLACEMENT À PLEINE CHARGE: 438 tonnes

# TRANSPORT

Government

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# CANADA



MARCH—APRIL • 1970 • MARS—AVRIL



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Editor A. Victor Bushe

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Rédacteur français Edouard Deslauriers

L'IMPRIMEUR DE LA REINE, OTTAWA, 1970



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**NORTHERN OPERATIONS**—Landing beach and resupply vessels of the Canadian Coast Guard at Cape Dyer during the 1969 Dew Line resupply operations. Vessels in the picture are, from left: SS Federal Pioneer, CCGS Montcalm, CCGS Narwhal and in the distance CCGS John A. Macdonald. Also in the picture are the LCM Barges 134 and 135 and in the foreground the trucks and barges used in the transportation of supplies. (Photo by Captain J. C. Smith)

**DANS LE GRAND NORD**—Cette photo nous fait voir comment s'effectue le ravitaillement des postes isolés de l'Arctique. La photo a été prise l'été dernier à Cape Dyer. Les navires qu'on aperçoit sont, de gauche à droite, le n.v. Federal Pioneer, le n.g.c.c. Montcalm, le n.g.c.c. Narwhal et le n.g.c.c. John A. Macdonald. On voit également les deux péniches de débarquement utilisées pour le transport des marchandises depuis les navires jusqu'au rivage. Sur la rive, grues et camions attendent les approvisionnements. (Photo prise par le capitaine J. C. Smith)



## From the Transportation Council

## Le conseil des transports

### *Improvements to the Welland section of the Seaway*

### *Améliorations à la section du chenal de Welland de la Voie maritime*

The development of canals along the Great Lakes System over the decades has provided Canada with a transportation artery which has had a most significant influence on the growth of the country. The most recent major work, the construction of enlarged locks and channels on the St. Lawrence River, completed in 1959, has permitted more than a fourfold increase in tonnage and has allowed Canada to utilize the cheapest form of transportation to remain competitive on world markets.

Au cours de la dernière décennie, l'évolution des canaux desservant les Grands lacs a fourni au Canada une artère de transport qui a grandement influé sur la croissance du pays. Les plus récents de ces travaux, la construction d'écluses élargies et de chenaux longeant le fleuve Saint-Laurent, complétés en 1959, ont eu pour résultat de quadrupler le tonnage et ont permis au Canada d'affronter la concurrence sur les marchés mondiaux en utilisant le moyen de transport le moins coûteux—l'expédition maritime.

Work on the Welland Canal during the Seaway expansion period—1955-1959—was largely confined to deepening and improving channels to Seaway standards. With the build-up of traffic and particularly the increase in the number of maximum size vessels, it became apparent that further improvements were required on the Welland. An intensive study was undertaken in 1964 and among other items which were given immediate attention, it was determined that the poorest navigating conditions in the whole of the Great Lakes network were on an 8½ mile section of the Canal between Port Robinson and Port Colborne. Passing through the centre of the City of Welland; this section was plagued by narrow winding channels, by the presence of five vertical lift bridges and by one swing bridge having its pier in the centre of the channel.

Les travaux exécutés au canal de Welland durant la période d'expansion de la Voie maritime—soit de 1955 à 1959—se limitèrent en majeure partie au creusage et à l'amélioration des chenaux afin que ces derniers rencontrent les normes de la Voie maritime. Avec l'accroissement de la circulation qui suivit, et particulièrement l'usage d'un plus grand nombre de navires de dimensions maximales, il devint évident que des améliorations supplémentaires étaient requises dans le Welland. Une étude approfondie, menée en 1964, révéla entre autre que les conditions de navigation les plus contraintes sur tout le réseau des Grands lacs se trouvaient dans un secteur de 8½ milles du canal de Welland, entre Port Robinson et Port Colborne. Ce secteur traverse le centre de la ville de Welland. Il comporte plusieurs



In 1965, the Government approved a Seaway recommendation to proceed with the relocation of that portion of the canal on a completely new alignment, by-passing the City of Welland along its easterly limits. The new and straightened channel, in addition to being wider—350 feet vs 192 feet—has been planned to eliminate all level vehicular crossings. A combined three-track railway and two-laned highway tunnel at Townline Road, plus a four-laned highway tunnel at Main Street, Welland, will provide for the uninterrupted movement of both railway and highway traffic under the relocated canal prism.

The scope of the work involved includes the removal and disposal of 68,000,000 cubic yards of earth excavation and the supply and placing of about 180,000 cubic yards of concrete in tunnel crossings, grade separations, river diversion and other miscellaneous structures. To avoid scarring the countryside, extensive planning of disposal areas was undertaken and the excavated material is being placed in embankment fills which are shaped as spines and knolls on each side of the new channel. The disposal pattern provides windbreaks for shipping and at the same time, after suitable landscaping, will add to the esthetic appearance of the area. Plans are afoot which can lead to the utilization of all surplus lands as public parks and recreation areas.

An integral element in the project is the re-routing of the Welland River, where it crosses the new channel, to a spot one-half a mile away. There it will be carried under the new canal in a giant 4-tubed reinforced concrete structure. This arrangement is necessary because of the difference in water levels between the canal and the river.

The railway network in the Niagara Peninsula must be modified substantially so that trackage will funnel to the common crossing tunnel at Townline Road. In addition major revamping of highways, minor roads, power lines and other utilities form a part of the \$160,000,000 project.

The Welland By-Pass is the most extensive improvement undertaken by the St. Lawrence Seaway Authority since 1959 and is scheduled for completion for the opening of navigation 1973. The wider channel, without level crossings, will permit vessels to proceed at faster speeds with greater safety and will be a marked improvement in the Great Lakes navigation system. The new construction will also relieve an intolerable vehicular traffic situation in the heart of Welland □

PIERRE CAMU, President,  
St. Lawrence Seaway Authority.

chenaux étroits et sinueux et est encombré de cinq ponts levis et d'un pont tournant dont l'estacade est située au centre du chenal.

En 1965 le gouvernement approuvait une recommandation de la Voie maritime d'entreprendre le déplacement de ce secteur du chenal sur un nouveau parcours, contournant la ville de Welland à ses limites est. Ce nouveau chenal, redressé aussi bien qu'élargi à 350 pieds comparativement aux 192 pieds du présent chenal, a été conçu en vue d'éliminer tout passage à niveau routier. Un tunnel à 3 voies ferroviaires et 2 voies routières à Townline Road, en plus d'un tunnel à 4 voies routières à Main Street, Welland, assurera le déplacement ininterrompu de la circulation ferroviaire aussi bien que routière sous la coupe prismatique du canal.

L'envergure des travaux comprend l'excavation de 68 millions de verges cubes de terre et l'emplacement d'environ 180 mille verges cubes de béton aux croisements des tunnels, aux sites de nivellement, au contournement fluvial et aux autres structures. Afin d'éviter la cicatrisation de la région, la planification minutieuse des lieux de rebuts a permis que le matériel d'excavation soit déposé en forme d'épines et de monticules de chaque côté du nouveau chenal. Cette disposition fournira des parevent à la circulation maritime tandis que le terrassement améliorera l'apparence de la région. Un plan présentement à l'étude pourrait mener à l'utilisation de tout l'excédent des terrains pour fins de parcs publiques et de lieux de loisirs.

Une partie intégrante du projet global est le détournement du cours de la rivière Welland, où celle-ci croise le nouveau chenal. Le cours de la rivière sera déplacé d'un demi-mille et celle-ci passera sous le nouveau chenal par moyen d'une structure géante munie de 4 conduits de béton armé. Ces travaux sont nécessités par la différence du niveau d'eau du chenal à celui de la rivière.

Le réseau ferroviaire de la péninsule du Niagara doit être modifié considérablement afin que les voies convergent au passage commun à Townline Road. De plus, une nouvelle disposition des grandes routes, des chemins secondaires, des lignes de transmission électrique et autres services publics font partie du projet de 160 millions de dollars.

Le chenal du détournement de Welland, sans doute l'amélioration la plus considérable entreprise par l'Administration de la Voie maritime du Saint-Laurent depuis 1959, doit être achevé avant l'ouverture de la saison de navigation 1973. Ce chenal, élargi, sans passage à niveau, permettra aux vaisseaux de naviguer à de plus hautes vitesses, avec une plus grande sécurité, et apportera une amélioration marquée à la navigation sur le réseau des Grands lacs. Ces nouveaux travaux de construction soulageront également la situation très pénible imposée à la circulation routière au cœur de la ville de Welland □

PIERRE CAMU, Président,  
Administration de la Voie maritime du Saint-Laurent.

## PRINCE EDWARD ISLAND



By Thomas E. Appleton  
Marine Historian.  
Department of Transport

When Prince Edward Island joined the Confederation of Canada on July 1, 1873, nine lighthouses and eight harbour lights came under the control of the Department of Marine and Fisheries. John Corbett was appointed as Marine Agent to superintend these aids to navigation at an annual salary of \$1,200, a considerable sum at that time. The nine lightkeepers, whose employment was seasonal, were paid amounts varying from \$163 to \$260 per season, the minor lights being attended by private individuals under contract to the department.

Mr. Corbett had barely started his new work when the Macdonald government fell and the second Canadian ministry, under the Hon. Alexander Mackenzie, came into power. In November the Marine Agent was dismissed on the grounds that there was not sufficient need for his office. The administration of the Agency, or at any rate the payment of staff wages and supply accounts, was placed in the hands of the agent of the Department of Finance.

This arrangement soon proved to be inadequate as the existing lights were in need of repair and were, in any case, below the standard of other lights in the Gulf of St. Lawrence, which were being improved as steamer traffic increased. Faced with the need for proper management, the Marine Agent's position was restored, the appointment going to William Mitchell at a salary exactly half that of his predecessor.

Despite this difficult beginning, some improvements had been made by the time Mr. Mitchell took over, the total number of lights, including range lights, having risen to 25. At the close of navigation in 1874 there was a small increase in staff who, in some cases, looked after several local lights.

### New lights erected

In the season of 1875 the fixed white light on North Cape was replaced by a revolving catoptric light and a number of other lights were erected or contracted for. These were West Point, Wood Island, Blockhouse Point, Rustico Harbour, New London, Sandy Island, Fish Island and Murray Harbour. A sad accident at South Rustico, when five men were drowned from a boat which capsized when attempting to run for shelter over the harbour bar, resulted in the erection of new range lights and the ap-

pointment of an additional lightkeeper, William Ford, at a salary of \$100 per season.

In this early stage of development there were no lighthouse steamers based in the Island, occasional visits being made by the government steamers *Napoleon III*, *Lady Head* and *Druid* from Quebec or Halifax. The regular vessel to supply the Prince Edward lights was the government schooner *Nickerson* from the Nova Scotia station. This question of steamer service was part of the wider problem of communications in general, particularly in winter, when no steamer then running could cope with the ice.

With this in mind, the Department of Marine and Fisheries ordered the *Northern Light* for the winter passenger service across Northumberland Strait. She was built by E. W. Sewell of Levis, Quebec for \$50,000 and was a wooden steamship of 144 feet in length. Classed to Lloyd's special survey for a life of 10 years, a high specification for the time, the *Northern Light* was designed for a speed of 14 knots, although it is doubtful if this was ever achieved. She had a compound surface condensing engine of 120 nominal horsepower, probably developing about 700 indicated horsepower.



The high hopes which had surrounded the advent of the *Northern Light* were dashed somewhat when she arrived at Charlottetown, under the command of Captain A. Finlayson, on December 7, 1876. On her first passenger trip the steering gear failed at the entrance to Pictou Harbour and throughout the winter of 1876-77 she required constant repair to counteract ice damage. Despite these troubles the service from Georgetown to Pictou was maintained at a total cost of \$13,000, while the purser of the *Northern Light* took in \$2,357.06 in passenger fares, freight and mail charges.

### Give assistance

Looking back to this period, one wonders how the *Northern Light* did so well, for today such a vessel would be considered feeble indeed. When the going was arduous other ships were brought in to help, notably the chartered wooden sealing steamer *Nep-tune*, owned by Job Bros. of St. John's, Newfoundland, and the Canadian Government steamer *Lansdowne*, also a wooden vessel, from Nova Scotia. Both these ships, although immensely strong in the hull to resist ice pressure, were underpowered by the rising standards of steamship construction. Eventually, in the winter of 1887-88, the *Northern Light* was found to be badly strained and was withdrawn from service. She was sold in 1890.

By this time the people of Prince Edward Island were protesting vigorously that the promise of an efficient winter ferry service, which had been one of the conditions of Confederation, had not been met, despite the efforts of the *Northern Light* and her consorts. With feelings running high, the Province brought the matter to the attention of the Imperial Parliament at Westminster, claiming compensation of five million dollars against the Canadian Government for breach of contract. Britain referred the matter to Ottawa, without taking direct action, and the federal government appropriated the sum of \$150,000 for the start of a new service to be maintained by up-to-date vessels.

The first of these ships was the CGS-*Stanley*, forerunner of a fleet which, for comfort and capability in winter passenger navigation, was then unique. Named after Lord Stanley, who had recently taken up his appointment as Governor General of Canada, the new vessel made her first run from Charlottetown to Pictou on December 18, 1888. Built by the Fairfield Shipbuilding and Engineering Company of Glasgow, Scotland, the *Stanley* was made of high tensile steel to Lloyd's special survey. She had a clipper bow and two raking masts, giving a deceptively yacht-like appearance which belied her real capability. With her triple expansion engine of 2,300 indicated horsepower, the *Stanley* was a powerful ship for her day and could steam at 15 knots.



SOLD IN 1935—Introduced in 1888, the *Stanley* was a powerful ship for her day. She remained in service until the railway car ferries took over.

VENDU EN 1935—Mis en service en 1888, le *Stanley* était un des plus puissants navires de cette époque. Il a servi jusqu'à l'avènement des transbordeurs capables de transporter des wagons de chemin de fer.

### P.E.I. Masters

In 1900 the *Stanley* was augmented by the CGS *Minto*, named for Lord Stanley's successor. Built by Gourlay Brothers of Dundee, Scotland, the *Minto* was somewhat larger than the *Stanley*, had a straight stem and cruiser stern, and was fitted with steam reciprocating machinery of 2,900 indicated horsepower. These two highly successful ships were commanded by Prince Edward Island men, both from Belfast. They were Captain Angus Brown of the *Stanley* and Captain Allan Finlayson of the *Minto*, formerly of the *Northern Light* and, in 1900, the senior master of the Marine and Fisheries service.

Despite the power of the two new steamers there were times when the ice was so thick that recourse had to be made to the old ice-boat service. This ferry, which operated from Cape Traverse to Cape Tormentine, carried mail, passengers and express freight when the steamers were held up. The boats were lightly constructed, about 19 feet in length and five and a half in beam, and were manned by a crew of five. Fitted with leather straps attached to the gunwales, it was possible for the occupants to jump out on the ice and haul the boats until clear water was reached. Passenger fares were four dollars for those who wished to ride all the way, with a reduction to two dollars for the hardier types who were prepared to jump out and help the crew.

Meantime, there was considerable progress in the aids to navigation. By 1890 the Agency at Charlottetown was looking after 52 lights and one fog alarm, 35 buoyed harbours, and an automatic whistle buoy at Indian Rocks which, it was reputed, could be heard for a distance of 15 miles. The agent was then Artemus Lord whose annual budget, including maintenance and repairs, ran to some \$20,000. Mr. Lord inspected his outlying lights in the schooner *Prince Edward*, and his report stated that he had found the stations in only 'fair' condition as to structure, although they were kept "in a good state of cleanliness" by the keepers. Even in 1890, the sum expended was very modest in view of the difficulties encountered.

### Too much for schooner

By 1899, the problem of lighthouse supply had become too much for the little schooner and it was decided to use a steamer. Put into commission towards the end of the season of 1899, the new supply vessel, CGS *Brant*, was placed under the command of Captain D. Mackinnon who had joined the Marine Service that year. A product of Prince Edward Island shipbuilding, the *Brant* came from John White of O'Leary Station and had engines and boilers manufactured by Bruce Stewart and Company of Charlottetown. Like the *Northern Light*, the *Brant* was built to Lloyd's 10-year classification and had a

compound steam engine with surface condenser. One hundred feet in length, and 19 feet in beam, the *Brant* was reported to be "... substantially built and is a very serviceable steamer. Her engines have worked well from the trial trip, giving a speed of 9½ knots per hour with a small consumption of coal." She had accommodation for a crew of 12, which was good for that period, and her total cost was \$19,000, including hull, machinery, furnishings and equipment.

When not engaged in winter ferry work the *Stanley* and *Minto* were employed on light station supply in the Gulf. The vessels of the Charlottetown Steam Navigation Company were on the summer ferry service, the season usually running from some time in April until December. By 1909, traffic had increased to the point where two winter ships were inadequate for the Prince Edward run and it was decided to order a third, and larger, icebreaking ferry steamer.

Continuing the vice-regal tradition of naming, the new ship was called CGS *Earl Grey*. Built in 1909 by Vickers Sons and Maxim, at Barrow in Furness, England, the *Earl Grey* was designed by Charles Duguid, who was the naval architect of the Marine Department in Ottawa. Captain Angus Brown was transferred from the *Stanley* and went to England with his crew to take over the *Earl Grey*. She was a very powerful ship, having triple expansion engines of 6,500 indicated horsepower supplied with steam from four boilers, and had a speed of 17 knots.

The *Earl Grey* was distinguished by a clipper bow, which looked out of place with her modern bridge and superstructure, but she was a handsome, if not beautiful, ship. In every other way the *Earl Grey* was the finest of the fleet until that time, and the queen of the passenger steamers. Her accommodation was fitted to the highest standards of the day, the public rooms being finished in mahogany panelling with white enamelled deckheads. She had velvet plush upholstery, electric lights in brass and cut glass mountings, and was steam heated. There was ample hot water for her tiled and mirrored bathrooms, and she was a magnificent passenger ship by any standards. In addition, the vessel was fitted with an extra suite of rooms suitable for distinguished official guests. Lord Grey, who was keenly interested in travelling the sea borders of Canada, used the ship on several occasions, including a voyage to Hudson Bay.

At the time the *Earl Grey* came into service, there was no compulsory retirement age for crews and it is interesting to note that Captain Brown was at that time 69 and remained in command for another few years. The Chief Officer, John L. Read, was a Summerside man, while the Chief Engineer, P. W. Lyon, hailed from Orillia in Ontario. Captain W. J. Dalton of Saint John, N.B. who relieved Captain Brown as master of the *Stanley*, was lost in 1917 when in command of the first *Simcoe*, which sank with all hands in rough weather off the Magdalen Islands.

## Sold to Russia

The fate of the three passenger icebreaking steamers is interesting. The *Stanley* remained on the run until the railway car ferries took over about 1918, but was eventually sold out of the marine service in 1935 and broken up. The *Earl Grey* was sold to Russia in 1914. Under the command of Captain Charles Trousdale, Royal Navy, she sailed for Archangel, where she was handed over to the imperial Russian Government and re-named *Kanada*. About the time of the revolution the name was again changed, this time to *III International* and, later, to *Fedor Litke*. The *Fedor Litke* had a long and distinguished career under the Russian flag before being broken up in 1959. Her wheelhouse is preserved in the maritime museum in Moscow. The CGS *Minto* followed the *Earl Grey* to Russia in 1915 but was less fortunate. She is believed to have been wrecked on the Norwegian coast.

The first *Brant* was laid up in 1928, when she was replaced by the second ship of that name. This second vessel was built at Sorel in the same year, and was known all over the East Coast until laid up in 1966. After that the Prince Edward Island lighthouse and buoy work was carried out by the *Saurel*, scrapped in Italy in 1968, and the present *Tupper*, built in 1959. The *Wolfe*, built in the same year, has also served at Charlottetown. □



LET'S WALK THERE—Here a six-man crew moves an ice-boat across the ice on Northumberland Strait to reach clear water.

ALLONS-Y À PIED—Il fallait parfois faire du portage pour franchir les champs de glace recouvrant le détroit de Northumberland.



NIPPED IN ICE-FLOES—The *Northern Light* suffered badly in her battle against the ice on the Georgetown-Pictou service. In the winter of 1887-88 she was found to be badly strained, was withdrawn from service and sold.

COINCÉ DANS LA GLACE—Le *Northern Light*, qui assurait le service entre Georgetown et Pictou, a lutté vaillamment contre les glaces pendant plusieurs années. Enfin, durant l'hiver de 1887-1888, il a fallu le retirer du service et le vendre. Il n'arrivait plus à fournir le rendement qu'on exigeait de lui.



# New advances in airport lighting: Canada in the forefront

by R. G. Smith, P. Eng., MIEEE,  
Regional Superintendent of Maintenance  
Engineering,  
Ontario Region

Among the navigational aids provided at airports in Canada, airport lighting is one of which we in the Department of Transport can be justly proud. Since the early days of flying, Canada has been among the world leaders in the development of airport lighting systems and some of the most recent developments are worthy of mention.

The safety considerations of airport operations have always been paramount in the minds of those who have developed the airport lighting systems in Canada, to the extent that almost all Department of Transport owned airports have emergency generating plants installed. These start automatically in the event of a commercial power failure to ensure availability of runway and approach lights at all times.

The now famous 'blackout' of November 9, 1965, which affected most of the North Eastern United States and the adjoining areas of Canada, served to point out the wisdom of the philosophy of our department in providing this facility. Even yet many of the large airports in the United States do not have such a backup for their airport lighting systems.

In recent years, with the tremendous upsurge in the aviation business and the high cost of operating large commercial aircraft, efforts have been made to increase the hours which airports are available for take-off and landing so that disruption of air carrier schedules is kept to a minimum.

This has involved the provision of additional navigational aids to enable pilots to operate when weather conditions have been lower than the previously accepted minimum limits.

## Centreline Runway Lighting

November 1967 saw the commencement of the first installation in Canada of Centreline Runway Lighting and by February 1968 this facility was switched on for test use at Toronto International Airport's main east-west runway known as 05R-23L.

This installation, together with its touchdown zone lighting and high speed taxi turn off lighting consists of some 412 lighting units, about 12 inches in diameter installed flush in the runway surface, which project a narrow beam of light at a predetermined angle to guide the pilot in the crucial part of his landing, runout and taxiing operation.

These lights, together with the runway edge lights and high intensity approach lights have brightness controlled from the control tower at the request of the pilot. The electrical load of this one runway lighting system alone is about 250 K.W. and is of course backed up by an emergency diesel generator unit.

For night-time operation, the touchdown zone lighting, which covers the first 3,000 feet of runway, has done much to alleviate the sensation which pilots had of landing

into a 'black hole'. This can be appreciated somewhat by comparing the transition of flying over bright high intensity approach lights and onto a black runway, to the experience of driving from bright sunlight into a poorly lighted tunnel.

Other major airports across Canada are being similarly equipped with Category II lighting, as this type of lighting is now known.

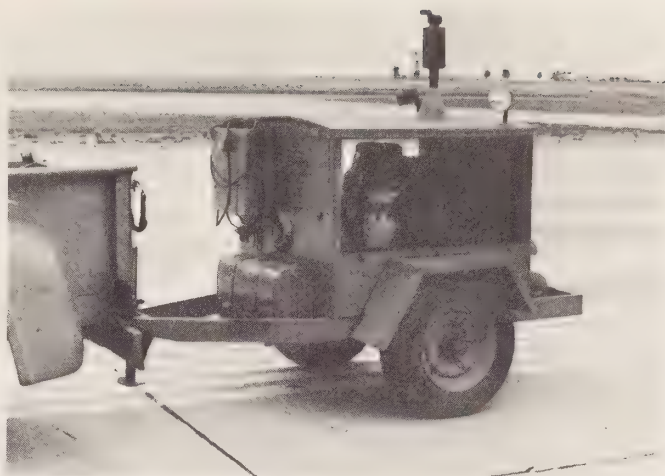
## Another "first"

In addition to providing this modern lighting at Toronto International Airport, another important 'first' has been accomplished here. Toronto has four runways; 05R-23L, 05L-23R, 14-32, and 10-28; each of which has one approach equipped with high intensity approach lighting. Until recently it was possible to illuminate only one such approach at a time; now it is possible to switch on two approach light systems simultaneously to permit simultaneous landings or take offs on selected runways. This is the only airport in Canada equipped with lighting to facilitate dual simultaneous approach and, we believe, the only airport approach in the world with this capability backed up by emergency on site, electrical generating capacity.

In the event of a power failure, when two approaches are in use, the selected approach lighting systems and the corresponding



**RUNWAY CENTRELINE**—Russ Awde, electrical supervisor, Toronto International Airport, examines a runway centreline lighting fixture.



**MAINTENANCE WORK**—Trailer mounted gasoline driven generator and air compressor used for carrying out maintenance on centreline lighting fixtures.

runway lighting systems are automatically supplied with power from the emergency generating unit, thus providing that degree of safety for which the Department of Transport is recognized and which is paramount in the design of all navigational aids provided by the department.

The design and modification of the con-

trol scheme to achieve this operation was carried out by Electrician Keith Wray, and myself at the Toronto International Airport.

The maintenance of the centreline lighting system has presented a new challenge to airport electricians at Toronto and the experience gained in servicing these units has been carefully documented and dis-

tributed to all other airports where similar installations will be installed over the next few years. A special trailer-mounted power unit provides light, power and compressed air for centreline lighting maintenance. This unit was designed and assembled by Pete Delaat, the Regional Mechanic in the Ontario Region □



### **“OPEN HOUSE” AT D.O.T. HANGAR**

As a first-time venture “Open House” was held for Flight Service employees and their families at the Department of Transport hangar at Ottawa Airport in the latter part of last summer. There were almost 400 in attendance and tours were conducted through the facilities. Films were shown, refreshments served and an opportunity given visitors to inspect a static display of department aircraft and see a brief flying demonstration.



### **JOUR DE VISITE AU HANGAR**

A la fin de l'été dernier, comme «première» dans les annales du ministère, on a ouvert les portes du hangar des Services de l'Air à l'aéroport d'Ottawa et fait un jour officiel de visite pour les employés et leurs familles. Ce fut un succès retentissant. On y a accueilli en fait plus de 400 personnes qui, accompagnées de guides avertis, ont fait une tournée complète des installations. Les visiteurs ont pu assister à une projection de films, voir les aéronefs et assister également à une démonstration de vol.





# VITAL WARTIME SERVICES

## Airport becomes victim of advanced technology

As quietly as it entered the brief history of the Northwest Staging Route, the Smith River Airport recently silenced its radios after one quarter of a century of service to the flying public. Spawned in the urgency of war the airport had become a victim of the advanced technology accelerated and produced by that war.

Smith River was a small emergency airport located in heavily forested and mountainous country in northern British Columbia, and 25 miles off the Alaska Highway at mile 517. Just 10 miles from the Yukon border, it was located to provide a direct route airway for World War II aircraft flying to Alaska and beyond.

During its operating years the station was staffed by 15 to 25 Department of Transport employees who were skilled in the tech-

niques needed to provide their special services. Runway maintenance crews, radio operating staff and weather observers formed the nucleus and their efforts were directed by an Airport Manager and a Telecommunications Station Manager.

While the men have gone, the service remains. The radio and navigational aids, communications facilities and weather reports are still available from the same area. Located at mile 499 on the Alaska Highway, Canada's first complete automatic weather station is now operating. Beside it, within sight of the highway, a non-directional radio beacon gives air navigational guidance, and overlooking the two, from a mountaintop above, a communications site provides the needed aircraft communications channels. Completely automated,

these units are all controlled and serviced by departmental staff at Watson Lake, Y.T., some 136 miles away.

In the era of rapid development and change it was inevitable that longer range aircraft and advanced electronic technology would obviate the need for airports spaced 100 to 150 miles apart, and would produce the capability to maintain and control electronic equipment from that distance.

During its existence the airport and its staff provided a vital and important service. It has disappeared but it will be long remembered by those pilots and passengers who, guided by the radio navigation aids, made emergency landings on its surface □

## *From weather observing to making violins*

Roland Richards, Officer-in-Charge of the Sydney Weather Office, retired on November 1 after serving more than 34 years with the department. A banquet was held at the Airport restaurant with many of his co-workers and their wives in attendance. Representing Regional Headquarters were George Washburn, Regional Superintendent General Weather Services and Stan Westhaver, Regional Supervisor Station Operations. On behalf of his fellow employees, Mr. Washburn presented Mr. Richards with a billfold containing money.

Mr. Richards' career with the Meteorological Branch has been an interesting one, having served under four Directors. He joined the Meteorological Service as a part-time Weather Observer on July 24, 1935. The weather station was then located at his father's home in the City of Sydney.

The position at that time required only two daily observations, one at 8:00 a.m., the other at 8:00 p.m. The observations were coded and telegraphed to Toronto, where forecasts for all Canada were issued. It is interesting to note a daily forecast for the entire Maritime Provinces might read: "Fair and warmer for tomorrow with possible showers".

Besides these daily observations, he was

required to look after the storm signals at Victoria Park, which is located near the water front. The storm signals consisted of two wicker baskets, one cone shaped, the other cylinder form. The baskets were raised 80 feet by rope in view to those who followed the sea. The position of the cone

basket or baskets indicated from which direction the gale was expected to blow. These signals were discontinued after the war.

During October 1939, with the outbreak of the war, he opened up the Meteorological Station at the R.C.A.F. Seaplane Base at North Sydney. Since few weathermen were available at that time, he was required to train R.C.A.F. radio operators.

In the Spring of 1940, the Sydney Airport was completed and the first Aviation Forecast office in this area was established.

During the Spring, Summer and Fall seasons of 1943, 44 and 45, he was appointed Officer-in-Charge of the Pan American Flying Boat Base located at Shediac, N.B. After termination of the war he assumed Officer-in-Charge of the Sydney Office, which he carried on until his retirement.

Mr. Richards has developed several ideas and designs in the inventive field which are in use by the department. Since the establishment of the Suggestion Award Committee, he has received several rewards.

On his retirement, Mr. Richards will carry on his work of violin making and repairing, including the restoration of antiques. J. A. (Al) Sutherland has succeeded Mr. Richards as Officer-in-Charge □



Roland Richards

# Ontario Science Centre has mini weather office

A new and continuing attraction in Toronto is the Ontario Science Centre which opened to the public on September 27, 1969.

The Meteorological Branch, in response to an early request to participate in the Centre, has a permanent exhibit in the Earth Science's section of the building. The purpose of the Centre is to keep people abreast of modern technology by making science real and understandable. The Meteorology exhibit accomplishes this objective and more.

Behind the counter facsimile and teletype machines, hooked into the Meteorological Branch's Communications System, provide the latest weather data, forecasts, charts and satellite photos from across the country. The exhibit is a mini "weather office" with its own instruments measuring the weather elements outside the building and recording them inside.

A fulltime meteorological technician, Joe Adamson, provided by the Ontario Region, staffs the display during most of the week answering questions from the Centre's multitude of visitors. Enough enthusiasm has been generated that Ontario Regional and Met. Branch Headquarters volunteers have shown up after-hours and on weekends to supplement the meteorological technician and to extend manned coverage of the facility to include most of the time the Centre is open.

The meteorological exhibit has already proved to be a popular attraction to the general public, school children, and such visitors as the Duke of Edinburgh and Governor-General Michener. Even pilots have been "checking on the weather" at the Centre prior to departing for the airport.

The Centre's "weather office" provides an excellent opportunity to inform the public on the activities carried out by Canada's national weather service. It also meets the growing number of requests from public schools and other educational institutes for tours to weather installations. It is estimated visitors to the Centre will number one million annually, excluding several hundred thousand school children ☐



**POPULAR EXHIBIT**—A visitor to the Weather Exhibit, Governor General Roland Michener, shows a deep interest in what W. J. Adamson, the Met. Technician on duty, has to say. To the left of the Governor General is Hon. J. A. C. Auld, Ontario Minister of Tourism and Information, and on the right D. N. Omand, the Director of the Science Centre. (Ontario Science Centre photo)

**D'UN ATTRAIT SPÉCIAL**—Le bureau météorologique miniature aménagé au Centre des sciences de l'Ontario, à Toronto, retient l'attention de nombreux visiteurs. Dans cette photo, on voit le gouverneur général Roland Michener qui s'entretient avec le préposé au kiosque, M. W. J. Adamson, à gauche. En compagnie du gouverneur général se trouvent l'honorable J. A. C. Auld, ministre du Tourisme et de l'Information de l'Ontario, à gauche, et M. D. N. Omand, à droite, directeur du Centre.

## Bureau météorologique miniature au Centre des sciences de l'Ontario

Le Centre des sciences de l'Ontario, inauguré à Toronto le 27 septembre 1969, constitue une attraction nouvelle et permanente.

En réponse à une demande de participation, la Direction de la météorologie a aménagé une exposition permanente dans la partie du Centre affectée à la Science de la terre. Le Centre a pour but de tenir le public informé des progrès de la technologie moderne en rendant la science concrète et compréhensible pour le public. L'exposition de la Météorologie atteint ce but et le dépasse.

Derrière le comptoir, les fac-similés et les télétypes reliés au système de communications de la Direction de la météorologie fournissent les toutes dernières données météorologiques, les prévisions météo, les graphiques et les photos prises par satellite en provenance de tout le pays. L'exposition constitue un «bureau météorologique» miniature dont les instruments mesurent les éléments météorologiques à l'extérieur de l'édifice et les enregistrent à l'intérieur.

Un technicien en météorologie employé à plein temps, M. Joe Adamson, détaché par la Région de l'Ontario, est préposé à l'exposition durant la plus grande partie de la semaine et répond aux questions des

nombreux visiteurs se rendant au Centre. L'enthousiasme suscité a été tel que des volontaires du bureau central de la Direction de la météorologie et du bureau régional de l'Ontario se sont présentés pour remplacer, après les heures normales et durant les weekends, le technicien de la météorologie, de façon à ce qu'il y ait le plus souvent un préposé à l'installation lorsque le Centre est ouvert.

L'exposition de la Météorologie s'est déjà révélée une attraction populaire auprès du grand public, des écoliers, tout en attirant des personnalités telles que le Duc d'Edimbourg et le gouverneur général Michener. Le Centre a même reçu la visite de pilotes, venus se renseigner sur les conditions météorologiques avant de se rendre à l'aéroport.

Le «bureau météorologique» du Centre fournit une excellente occasion d'informer le public de l'activité du service météorologique national canadien. Il donne aussi satisfaction au nombre croissant d'écoles et autres centres éducatifs qui demandent à visiter les installations météorologiques. On estime que le nombre de visiteurs au centre s'élèvera à un million par an, sans compter plusieurs centaines de milliers d'écoliers ☐



L'effort constant, clé du succès

## Centres de retention

Par Michel Azam  
Conseiller spécial en bilinguisme

Tout le monde est d'accord que le succès de tout enseignement de la langue seconde repose largement sur les occasions de s'y exercer hors de la classe. C'est en forgeant qu'on devient forgeron. Eh bien, les quelque 350 fonctionnaires de l'administration centrale qui suivent à chaque année les cours de langues peuvent maintenant sans trop se déranger non seulement trouver une salle, des appareils, des rubans qui leur permettraient de se perfectionner, de répéter leurs leçons apprises, de refaire leurs exercices, de compléter leurs aptitudes, de polir leurs structures et leurs phrases, mais de plus, dans une atmosphère stimulante de travail, trouver un spécialiste pour les conseiller et les faire avancer; un animateur pour leur fournir, dans des séances de conversations dirigées de débats, de films, d'événements sociaux culturels et de contacts réels avec toutes sortes d'activités, l'occasion de mettre en pratique ce qu'ils ont appris.

En effet le ministère des Transports vient de prendre les devants dans le domaine de la retention des langues en aménageant 2 petits centres de retention dont le décor et les couleurs sont choisis pour changer les étudiants de l'atmosphère des bureaux et surtout celle des écoles. Ils sont situés l'un, à la salle 305 édifice Hunter et servira aux étudiants de l'administration et ceux du service de la marine; l'autre, destiné aux fonctionnaires du service de l'air aux salles 1100 et 1102 de l'édifice temporaire no. 3. Chaque centre est composé d'une salle d'étude et d'une annexe. La salle comprend table, fauteuils, projecteur, écran, magnétophone enfin tout ce qui pourrait servir aux groupes d'étudiants du 3e niveau, ou même au delà du 3e, qui voudraient discuter, apprendre avec l'animateur chargé de stimuler et de guider les groupes.

Tout autour de la salle et accrochées aux murs se trouvent huit (8) positions ou cabines de laboratoire. Cependant, elles sont différentes des cabines conventionnelles du fait qu'elles ne comportent pas de magnétophones mais seulement 3 ou 4 boutons de télécommande. L'étudiant ne s'encombre plus de rubans et de machines et se consacre entièrement à l'audition et à la répétition.

L'annexe est une salle plus petite mais bien plus imposante. En effet, la plupart des machines se trouvent là. Le responsable trône devant une console semblable à un tableau de bord d'un supersonique. Il peut

diffuser 8 programmes différents et contrôle totalement les 8 positions. Il peut suivre le déroulement de l'exercice dans chaque cabine et intervenir, s'il le faut, pour corriger ou faire répéter un son ou une structure.

Mais son rôle ne s'arrête pas là. C'est lui qui est le moteur même de ce centre. Il organise les réunions, les cours, les discussions, lance les invitations, sépare les candidats en groupes homogènes. Son travail au premier et au 2e niveau reste très limité et se borne à conseiller et à choisir des exercices structuraux adéquats. Mais pour le 3e niveau, il lui reste tellement de choses à faire. Il pourra même avec un peu d'imagination créer des situations qu'on ne rencontre pas dans la vie courante ni dans les livres et stimuler tout enseignement qui ne soit pas conventionnel. Dans son bureau, il aura aussi son kiosque à journaux et revues où les candidats bilingues pourraient lire et discuter des articles de tous genres bien choisis. Il trouvera aussi les moyens susceptibles d'aider à la compréhension de la culture canadienne-française et peut être par le cheminement de la discussion faire comprendre les concepts du bilinguisme.

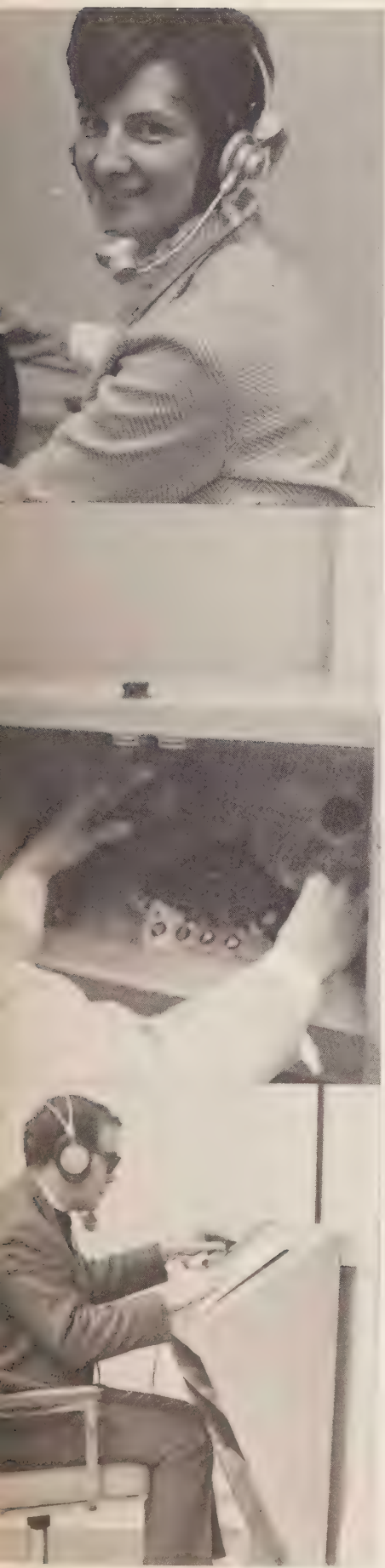
Si l'expérience s'avère fructueuse nous avons l'intention de doter les régions de ces mini-laboratoires peut-être même de plus modernes.

Hâtons-nous d'ajouter que ces deux centres ne constituent en aucun cas des écoles de langues et ne sont que des centres complémentaires favorables à la retention de l'enseignement déjà acquis dans les écoles de la fonction publique.

La réussite est à votre portée et le succès garanti à condition bien entendu de montrer votre intérêt et de venir en grand nombre ☐

EN SALLE D'ÉTUDE—Chaque étudiant des langues a son propre pupitre, et, à l'aide des écouteurs, on lui évite toute distraction et il est également en mesure de s'entretenir avec le responsable du centre qui conseille et guide l'étudiant dans ses études. C'est le responsable du centre qui choisit les sujets les plus appropriés, selon les aptitudes de l'étudiant. La matière à réviser est enregistrée sur ruban, comme nous l'indique ici Mme Ghislaine Hurley, assise devant la console à l'aide de laquelle on peut diffuser huit programmes d'étude différents destinés aux huit étudiants qui pourraient se trouver dans le centre au même moment.





## New laboratories to assist in language training

Through the cooperation and financial support of its Branches, the Department of Transport has found a new way to help its employees who have been taking French and English courses. With the introduction of language training, it is the first department in the Public Service to provide special facilities for an entirely new concept which allows continuing study for its employees.

Each year about 350 employees of the department's headquarters are taking courses in both the French and English languages and without a guided program on return to their branches these employees may find themselves working in a vacuum and likely to lose most of what they have gained on the courses. At the language schools they are encountering swift and effective teaching, which enables them to develop a new linguistic skill. However, when the course is completed they may find themselves back at their desks in an English or French work environment without any effective means of keeping up their newly-acquired knowledge.

The method which the department has introduced under the guidance of Michel Azam, Special Advisor on Bilingualism, operates through two small centres serving Headquarters and the Branches—one in the Hunter Building and the other in No. 3 Temporary Building.

Mr. Azam stresses the use of new audio-visual techniques and is endeavouring to introduce the latest discoveries in the teaching of a second language. The method which has been introduced in the department is unique in that it provides programs which are tailored to individual needs.

The new centres do not offer language courses as this is not a departmental function. Instead they are "tutorial power houses" which are designed for language retention and improvement.

Eight separate desks are facing the walls giving privacy to the individual student. At each desk is a combination earphone and microphone set. The student has no tapes to change and merely has to operate four push buttons to obtain his programs.

**NO DISTRACTIONS**—Separate desks with combination earphone and microphone sets ensure that students' studies are not disturbed. Sitting at the master console Chislaine Hurley can operate eight separate programs and can communicate directly with the students. As she receives requests for instruction programs she installs the required tape.

Programs are controlled by a tutor sitting at a master console in the adjoining control room. The tutor can operate eight separate programs and can communicate directly with any student. A student may ask the tutor for immediate help, if needed, by pressing the appropriate button.

With first and second level students the tutor is mostly occupied in giving advice on the strengthening of already acquired knowledge or in recommending revision work. For level three students conversational practice is the top need. Language fluency requires thinking in that language otherwise nothing more is achieved than a two-way mental translation and this defeats the whole object of the program.

The centres are being planned to run conversation sessions, debates, films and social events in order to create student involvement in every kind of French and English speaking activity on a natural non-classroom basis. The study room is being equipped with a table, chair, projector, screen and tape recorder for the tutor's use to aid this process.

The tutors also keep a good supply of Canadian-French newspapers, magazines and other publications on hand. Level three students are encouraged to read these, and articles are used as a basis for informal discussion groups initiated either by the tutor or by the students themselves.

Centres provide students with any part of a completed course they may wish to revise and also structure tapes to solve individual problems or to meet the work situation needs of specific groups.

The official courses will impart a good working knowledge of the language but can only be general in scope; the centres are seeking to supplement the teaching proper with practical help in real work situations.

It must be stressed that the centres are not in any sense language schools, nor do they attempt to act as a local substitute for such schools. What they aim at and what they are already achieving is the maintenance and adaption of already acquired skills to the everyday needs of the individual and of the department as a whole, so that public monies spent on language training may be used to the maximum possible advantage.

If it is the department's experience that these language centres are successful, it is the intention to provide regions with similar or even more modern laboratories □



# WORLDWIDE PROBLEM OF POLLUTION

## D.O.T. taking active part in preventive measures

by J. H. Birtwhistle  
Superintendent, Machinery Inspection,  
Department of Transport

Today, in many countries of the world, there is grave concern regarding the pollution of land, air and water. The waste materials produced by highly populated and industrialized areas have reached a level beyond which the natural processes cannot effectively perform normal bio-degrading action. These wastes adversely change the ecology of the environment into which they are injected. Such materials include radioactive waste, sewage, pesticides, detergents and oils. Governments and industries are now taking active anti-pollution measures to combat the menace.

Canada's efforts are being directed by both Federal and Provincial Governments, departments and agencies with the cooperation to a greater or lesser degree of the industries concerned. The Department of Transport is primarily concerned with the pollution that occurs from ships, and as long ago as 1957 issued the Oil Pollution Prevention Regulations which make it an offence to discharge oil or oily mixture into Canadian waters. These regulations apply to foreign vessels while within Canadian waters and to Canadian vessels anywhere in the world.

Penalties imposed under these regulations can result in a \$5,000 fine, six months in jail, or both. Since the inception of the regulations the department has obtained more than 100 convictions against offending ships.

### Prosecution of offenders

The department has established systematic procedures for the detection and prosecution of oil pollution offenders. Steamship Inspectors operating from 19 field offices across the country can be engaged

in investigating cases and instituting prosecutions. The cases are often brought to the attention of the inspectors by the general public, provincial or municipal officials, police forces and fishery officers. In addition, the department carries out aerial surveys during the summer season over the St. Lawrence River and the lower Lakes. These surveys were previously made by helicopters but now a fixed wing aircraft is exclusively used for this purpose. A Steamship Inspector accompanies the pilot on each survey so that his technical assistance is immediately available should a prosecution arise. In these cases the prosecution machinery is the same as that used in other summary conviction criminal cases.

Inspectors collect evidence, act as informants by laying information before a Justice of the Peace and appear as witnesses in magistrate's court. As cases sometimes arise quickly and are usually defended by legal counsel, the services of a Crown legal agent must be immediately available to the Inspector. This is arranged for by the Department of Justice who appoint lawyers from the private sector to act as standing agents on behalf of the Crown.

The Royal Canadian Mounted Police often help inspectors in making investigations. They make arrests and issue summonses, but their terms of reference specify them as assisting the inspectors. The R.C.M.P. do not initiate oil pollution investigations unless Department of Transport facilities either do not exist or have been exhausted.

To assist the department, all fishery officers and masters, and all Canadian Coast Guard masters have been designated as inspectors under the Oil Pollution Pre-



Isolated oil patch on Lake Erie.

vention Regulations. Their primary duty is to observe and report to the nearest Department of Transport inspection office any case of pollution coming to their attention.

Since the promulgation of the Oil Pollution Prevention Regulations in 1957 inspectors have gained considerable experience in investigation techniques and courtroom procedures so that the service now averages about 20 convictions per year, giving a total to date of 114.

Records kept since 1957 show an increase in the number of prosecutions until 1967 after which a decline has been noticed. As our efforts to locate and prosecute offenders have not been lessened this decline can only be the result of a lower incidence of oil pollution from ships. The department's efforts have led to a very much increased awareness on the part of ship masters and engineers of the consequences of infraction of the Regulations.

### International involvement

Pollution is of international concern and Canada is an active party to the International Convention for the Prevention of the Pollution of the Sea by Oil. Most maritime nations are party to this Convention and under its terms investigations may be made and evidence gathered concerning the pollution of the sea within 100 miles of the limits of Canadian coastal waters by any Convention cargo ship more than 500 tons gross or Convention tankers more than 150 tons gross.

Non-Canadian Convention ships suspected of pollution outside Canadian waters cannot be prosecuted in Canadian courts, but substantiated evidence of pollution by such ships may be forwarded to the

country of registry for action through the Department of External Affairs. Evidence of such pollution is usually gathered by Canadian military aircraft which take photographs identifying the ships concerned and the trailing oil slicks which indicate pollution.

The above-mentioned Convention is maintained under constant international consideration by means of the Inter-Governmental Maritime Consultative Organization under which a committee dealing with pollution of the high seas meets regularly with a view to up-dating the Convention or taking such other measures that would appear necessary to reduce pollution.

Canada is a member of the committee dealing with marine pollution and thereby receives valuable information in addition to contributing to the work of the committee and presenting Canada's view-point. As an indication of the growing world interest in pollution of the seas it should be noted that the terms of reference of this committee have recently been enlarged to cover all types of marine pollution in addition to that of the oil pollution for which the committee was originally set up.

#### Impending legislation

The measures quoted above are designed essentially to prevent pollution by punitive measures only and can, therefore, only be aimed at the type of pollution that can be prevented by ordinary human care and forethought. We are still faced with the danger of pollution caused by shipwreck or by other accidents outside human control. Indeed, some of the most serious sea and coastal pollutions have occurred from such sources, of which the notorious *Torrey Canyon* is only one example. A more recent example closer to home is that of the Liberian-registered tanker *Arrow* which as this edition went to press, was breaking up and spilling some of its cargo of oil into Chedabucto Bay, Nova Scotia.

A recent amendment to the Canada Shipping Act gives the Department of Transport authority to take action in the event of pollution occurring from the cargo or fuel of a ship in distress and to this end the department is preparing a contingency plan which will set forth the procedure to be followed both in preparing for and mitigating the effects of pollution from a ship disaster.

The same amendment to the Shipping Act also gives authority to write regulations dealing with the discharge of sewage and garbage from ships and to prevent pollution from chemicals that may be carried in bulk. Regulations are now in course of prepara-



IN THE SETTING SUN—The car ferry Lucy Maud Montgomery shapes up against the setting sun at Cape Tormentine, New Brunswick. The ship went into service with the Northumberland Strait ferry fleet last summer and carried a large number of passengers over the nine-mile stretch of water between Borden and Cape Tormentine. (Canadian National photo)

AU SOLEIL COUCHANT—Cette photo, prise au soleil couchant, fait voir le nouveau transbordeur Lucy Maud Montgomery qui fait la navette dans le détroit de Northumberland entre Borden et Cap Tormentine. Mis en service l'été dernier, le Lucy Maud Montgomery a déjà transporté des milliers de voyageurs d'une rive à l'autre. (Photo du Canadien National)

tion for these further types of pollution and it is expected that the regulations controlling the discharge of sewage and garbage from commercial shipping will be in force in the very near future.

A draft regulation dealing with the carriage of bulk chemicals in ships has been circulated to the industry for comment and even in its present form is proving to be of considerable use in guiding naval architects and shipbuilders in the design of such vessels.

Although the department has so far put most of its effort into the prevention of pollution by oil on the Great Lakes and the East and West Coast of Canada, it is nevertheless fully aware that this is only part of the whole problem. The danger of pollution from bulk chemicals is growing with industrial progress and the department

will continue to play a developing role in a national attack on this aspect of the pollution problem as it relates to ships.

There is a possibility of oil tankers operating in Arctic waters and the department is taking this under consideration and will present the conditions for the operation of such ships and so, lower the possibility of any major pollution taking place.

The question of the legal consequences of pollution forms part of the concern of the department and an active part was played in the recent international conference held in Brussels on this matter.

The Department of Transport has always been in the forefront in the attack on the pollution of our environment from ship sources. It is intended that we continue to play this leading role. □



# LE PROBLÈME MONDIAL DE LA POLLUTION

## Le ministère des transports joue un rôle actif dans la prévention

par J. H. Birtwhistle  
Surintendant, division de l'inspection des machines de navire,  
ministère des Transports

Dans la plupart des pays du monde, on s'inquiète aujourd'hui de la pollution du sol, de l'air et de l'eau. L'accumulation des déchets des régions industrialisées surpeuplées a atteint un niveau au-delà duquel la nature ne peut accomplir efficacement la transformation biochimique habituelle. L'écologie du milieu dans lequel ces déchets sont déversés en est donc affectée.

Ces matériaux comprennent les déchets radioactifs, les eaux-vannes, les pesticides, les détergents et les hydrocarbures. L'État et l'entreprise privée prennent actuellement des mesures énergiques pour combattre cette menace.

Au Canada, la lutte est menée par les ministères et organismes tant du gouvernement fédéral que de ceux des provinces, avec la collaboration de certaines entreprises en cause.

Le ministère des Transports s'occupe surtout de la pollution causée par les navires, et dès 1957, il a promulgué le Règlement sur la pollution des eaux par les hydrocarbures. Ce règlement interdit le déversement d'hydrocarbures ou de mélanges d'hydrocarbures dans les eaux canadiennes. Il s'applique aux navires étrangers se trouvant en eaux canadiennes de même qu'aux navires canadiens n'importe où dans le monde.

Le règlement prévoit des peines pouvant aller jusqu'à \$5,000 d'amende, six mois d'emprisonnement ou les deux à la fois. Depuis l'entrée en vigueur du règlement, le ministère a obtenu plus de 100 condamnations contre des navires en infraction.

En 1964, le ministère des Transports a établi une autre réglementation aux termes de laquelle tout navire qui, sans nécessité, pollue l'air par la fumée commet une infraction. Ce genre de pollution, toutefois,

disparaît rapidement à mesure que les diesels remplacent les chaudières à vapeur à bord des navires. Il est évident que ce règlement n'a donc pas été appliqué aussi souvent que le Règlement sur la pollution des eaux par les hydrocarbures.

### Les poursuites

Le ministère a organisé dans les détails la recherche et la poursuite des personnes coupables de pollution par hydrocarbures. Les inspecteurs de navires à vapeur des 19 bureaux régionaux du territoire national ont le pouvoir d'enquêter et d'entreprendre les poursuites. Les infractions leur sont signalées par des particuliers, des fonctionnaires fédéraux et provinciaux, des fonctionnaires des pêcheries.

Les inspecteurs rassemblent les preuves, déposent l'information devant un juge de paix et comparaissent à titre de témoins en cour de magistrat. Étant donné que les causes sont souvent entendues à brève échéance et que les accusés sont habituellement défendus par un avocat, l'inspecteur doit pouvoir recourir immédiatement aux services d'un procureur de la Couronne. Le ministère de la Justice y pourvoit en nommant des avocats du secteur privé au poste de représentant de la Couronne.

La Gendarmerie royale du Canada aide souvent les inspecteurs à faire leur enquête. Ces agents se chargent des arrestations et des sommations, mais leurs attributions précisent qu'ils ne sont qu'assistants des inspecteurs. La Gendarmerie royale ne prend pas l'initiative des enquêtes sur la pollution des eaux par hydrocarbures, sauf si les voies et moyens prévus par le ministère des Transports n'existent pas ou ont été épuisés.

En plus des inspecteurs du ministère, tous

les fonctionnaires des pêcheries et les capitaines de navires de la Garde côtière sont désignés à titre d'inspecteurs en vertu des termes du Règlement sur la pollution des eaux par les hydrocarbures. Ces agents, bien qu'ils puissent légalement monter à bord de tout navire en eaux canadiennes lorsqu'ils soupçonnent un cas de pollution, ne se chargent pas habituellement de cette partie de l'enquête. Leur tâche consiste surtout à observer et à signaler au bureau d'inspection du ministère des Transports le plus proche tout cas de pollution dont ils pourraient avoir connaissance.

Depuis la promulgation, en 1957, du Règlement sur la pollution des eaux par les hydrocarbures, les inspecteurs ont acquis beaucoup d'expérience dans les techniques d'enquête et les procédures judiciaires, ce qui explique que ce service obtient maintenant une moyenne de 20 condamnations par an.

Nos dossiers sur le sujet remontent à 1957. On a noté, depuis 1967, un déclin dans le nombre de contraventions. Comme nos efforts pour assurer l'observance des règlements n'ont pas ralenti, il faut conclure que les capitaines et mécaniciens de navires sont tout simplement plus conscients des peines auxquelles ils s'exposent en permettant le déversement d'hydrocarbures en eaux canadiennes.

### A l'échelon international

La pollution est une préoccupation d'échelle internationale. Le Canada, comme la plupart des nations maritimes, adhère donc à la Convention internationale pour la prévention de la pollution de la mer par les hydrocarbures. En vertu de cette Convention, des enquêtes peuvent être entreprises et des preuves réunies jusqu'à 100

milles de la limite des eaux côtières canadiennes par tout cargo de plus de 500 tonneaux de jauge brute, ou par tout pétrolier de plus de 150 tonneaux de jauge brute, appartenant à un pays signataire de la Convention.

Les navires non canadiens appartenant à des pays membres et soupçonnés d'être la cause de pollution hors des eaux canadiennes ne peuvent pas être poursuivis par les tribunaux canadiens. Toutefois, les preuves de pollution par ces navires peuvent être expédiées au pays d'immatriculation par l'entremise du ministère des Affaires extérieures. Ces preuves de pollution sont habituellement établies par des avions militaires canadiens qui prennent des photographies des navires coupables et des nappes d'hydrocarbures indiquant la pollution.

La Convention est soumise à un examen constant, à l'échelon international, grâce à l'Organisation intergouvernementale consultative de la navigation maritime. Le comité s'occupant de la pollution en haute mer se réunit régulièrement pour mettre à jour la Convention ou pour prendre toutes autres mesures qui s'avéreraient nécessaires pour diminuer la pollution.

Le Canada est membre du Comité de la pollution maritime et, de ce fait, il reçoit des renseignements de valeur, outre le fait de participer au travail du Comité et de présenter le point de vue du Canada. À titre d'indication de l'intérêt croissant que suscite le problème de la pollution à l'échelon mondial, on doit noter que les attributions du Comité ont été dernièrement élargies afin de tenir compte de tous les types de pollution maritime autres que la pollution par hydrocarbures qui avait primitivement motivé la création du Comité.

#### La législation à venir

Les mesures ci-dessus ont été conçues principalement comme mesures punitives. En conséquence, elles ne peuvent viser que la pollution qui peut être évitée par la prévoyance et le sens de la responsabilité des intéressés. Mais nous devons encore faire face au danger de la pollution causée par les épaves ou par des accidents échappant au contrôle humain. En fait, certaines des pollutions survenues en mer et sur les côtes ont une telle origine, et le plus connu de ces accidents maritimes, celui du Torrey Canyon, n'en est qu'un exemple. Un incident encore plus récent est celui du navire-citerne "Arrow" qui, au moment où nous allions sous presse, était en train de se désintégrer sur la côte de l'Atlantique, déversant une partie de sa cargaison d'huile dans la baie Chedabucto, Nouvelle-Ecosse.

Un amendement récent à la Loi sur la marine marchande du Canada autorise le

ministère des Transports à prendre des mesures dans le cas de pollution occasionnée par la cargaison ou le carburant d'un navire en détresse. À cette fin, le ministère est en train de préparer un plan, à mettre en œuvre en cas d'accident, qui énumérera les mesures à observer pour être prêt à affronter et à atténuer les effets de la pollution à la suite d'un sinistre maritime.

Le même amendement à la Loi sur la marine marchande du Canada permet de réglementer l'évacuation des eaux-vannes et des ordures par les navires et d'empêcher la pollution par les produits chimiques pouvant être transportés en vrac.

Quant au transport de produits chimiques en vrac par les navires, un projet de règlement a été mis en circulation dans les milieux intéressés. On attend les commentaires. Même sous sa forme actuelle, ce projet s'avère très utile pour guider les ingénieurs des constructions navales et les constructeurs de navires dans la conception de navires équipés à cette fin.

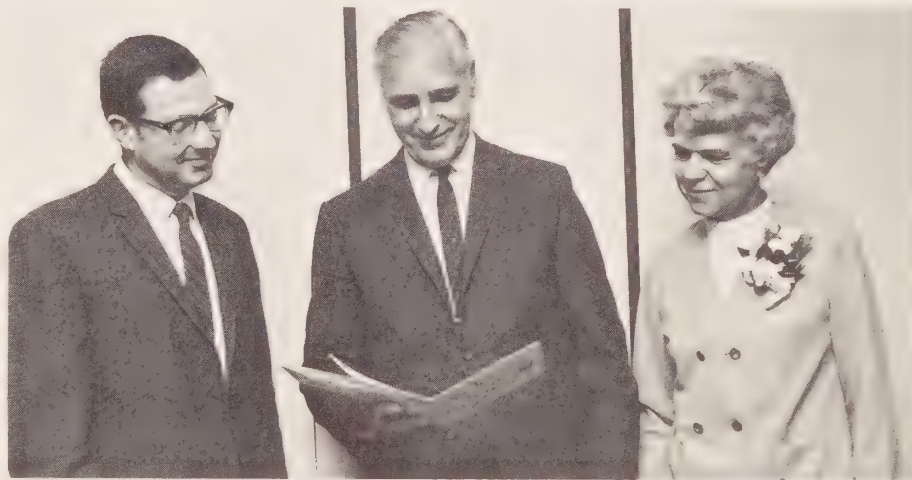
Le ministère a jusqu'à maintenant porté

une attention plus particulière à la pollution par les hydrocarbures dans les Grands lacs ainsi que sur les côtes est et ouest du pays. Il est fort bien conscient tout de même que là n'est pas tout le problème. Les produits chimiques transportés en vrac constituent une autre menace croissante de pollution. C'est un autre aspect du problème qu'on surveille de très près.

Il y a également la possibilité de voir un jour des navires-citernes circuler dans l'Arctique. Les mesures appropriées seront prises pour écarter tout danger de pollution dans ces eaux.

Les aspects légaux du problème de la pollution sont également d'un intérêt particulier au ministère. On a récemment pris une part active à une conférence internationale sur le sujet à Bruxelles.

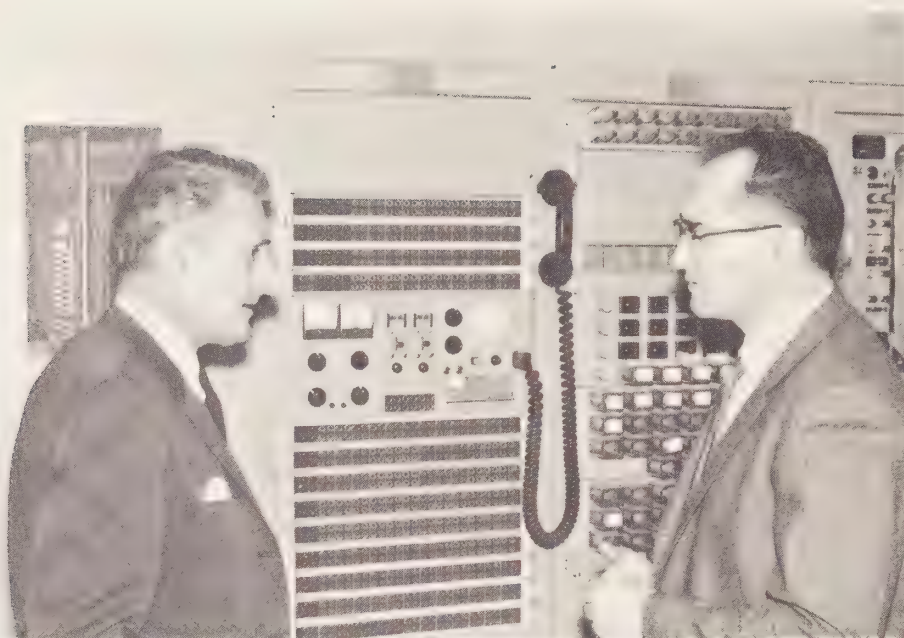
Le Canada est un meneur dans la lutte contre la pollution causée par les hydrocarbures et le ministère des Transports a bien l'intention de continuer à assumer son rôle de premier plan dans ce domaine □



FOLLOWS THE CANADA GEESE—R. B. Glass, Chief, Engineering Support Division, Construction Engineering and Architectural Branch of the department, left, makes a presentation to Stanley E. Hill on his retirement after 31 years' service. At the presentation in the Century Building, Ottawa, in November, Mr. Hill spoke of his early service as a radio operator in outposts, where his young wife started married life with burlap for floor carpeting and dynamite boxes for kitchen cabinets. He initially served as a radio operator at Nakina, Pagwa and Fort William and then in Ottawa with the Telecommunications Branch. Latterly he was with the Construction Branch. Mr. and Mrs. Hill were heading south following the presentation. "The other evening I saw a large flock of Canada Geese heading south and I said to myself: 'Buddies, I won't be long behind you,'" Mr. Hill told those assembled for the presentation.

RETRAITE BIEN MÉRITÉE—M. Stanley E. Hill, au centre, de la Direction de la construction et de l'architecture des Services de l'Air du ministère, a pris sa retraite récemment après plus de 31 ans de service. On lui a fait une présentation au cours d'une fête en son honneur à l'édifice Century, à Ottawa. Le chef de la Division du soutien technique, M. R. Glass, à gauche, a fait la présentation à M. Hill qui paraît ici en compagnie de son épouse. M. Hill a commencé sa carrière au ministère à titre d'opérateur radio à Nakina, Pagwa et Fort William avant de passer à la Direction des télécommunications. Puis, il a été muté à la Direction de la construction et de l'architecture. Lui et son épouse ont décidé de se payer d'abord de longues vacances dans les contrées plus chaudes du sud... et qui peut leur reprocher une telle décision?





**SUGGESTION PAYS**—Gordon I. Wilson, Standards Officer at Edmonton, left, has talk with L. Zuccato, Regional Maintenance Supervisor. They have been looking at a piece of equipment which was part of the modification suggested by Mr. Wilson.

## Employees who turned ideas into dollars

Suggestions bringing awards to Department of Transport personnel in recent months have ranged from revision of certain mailing lists to improvements in lighthouse equipment, and from improvements in a paint mixing machine to a saving in manpower through improved processing of departmental report forms. The awards, made under the department Suggestion Award Program, have ranged from \$15 to \$300.

Frederick Stuart Crane of Toronto was awarded \$300 for his suggestion for replacement of gears on baggage conveyer at Toronto International Airport, while Gordon I. Wilson of Edmonton won \$200 for his suggestion for modification to test set generator in communication control systems.

Saving in manpower in processing of "An accident has been reported" form. \$15 award . . . W. Allan Gregory, Management Services, Ottawa.

Telephone locals inserted below signature on memoranda. \$20 award . . . Mrs. P. M. Nicholson, Law Branch, Ottawa.

Improvement in work procedures in dealing with stationery items. \$75 award . . . Miss J. L. Hanlon, Telecommunications and Electronics Branch, Regina.

Insertion of telephone numbers below signatures on branch memoranda and minutes. \$20 award . . . Mrs. J. Lieff, Personnel T & D, Ottawa.

Lighted plexiglass display board for control towers. \$30 award . . . K. M. Ralph, Air Traffic Control, Toronto.

Helicopter mirror for safety and ease of flight operations. \$100 award . . . John Robillard, Coast Guard helicopter section, Victoria.

Relocation of valve controlling clutch on rear engine of foam vehicles. \$40 award . . . D. A. Eaglestone, Fire Chief, Halifax International Airport.

Use of window envelopes for Radio Regulations Forms to cut cost of addressing envelopes. \$15 award . . . Miss R. Slutsky, Air Services, Vancouver.

Revision of mailing lists to ascertain manual requirements. \$30 award . . . C. E. Sykes, former lightkeeper, Sandheads Light Station, B.C.

Use of paint colour dispenser mixing machine. \$30 award . . . W. K. Sloan, Foreman Painter, Vancouver Regional Office.

Aircraft plotting ruler. \$20 award . . . D. L. Cunningham, Air Traffic Control, Edmonton.

Helmet and facepiece for foam turret operators at airports . . . \$40 award . . . H. C. W. Dore, Firefighter, London Airport.

Changes in turret control device on large foam trucks. \$50 award each . . . Orest Grykuliak and David Knight, Fire Chief and Firefighter, Saskatoon Airport.

Rubber matting on FWD nurse truck to avoid firefighters slipping. \$25 award . . . E. J. Corbett, Firefighter, Halifax International Airport.

Improved propeller assembly tool to save time and reduce damage. \$75 award . . . G. L. Mitchell, Mechanic, Ottawa Airport.

As safety device, replacing brass springs on aerial hoist at lighthouse station with shock cord. \$50 award . . . R. H. W. Collins, Lightkeeper, Winter Harbour, B.C.

Use of "Unsatisfactory Product Report Form". \$50 award . . . George P. Norman, Stephenville, Nfld.

Introduction of standard nylon typewriter ribbons and standard weight carbon paper. Two \$30 awards . . . Miss Isabel Ferguson, Minister's Office, Ottawa, Ont.

Back-up system of time correlation on ACC Tape Recorders. \$20 award . . . Anthony Efting, Vancouver, B.C.

Revised form for recording of plant equipment on temporary loan. \$50 award . . . James W. Woolsey, Peterborough, Ont.

Machine folding of file covers. \$30 award . . . Richard Robb, St. Boniface, Man.

Rewiring of Precision Approach Radar System. \$100 award . . . Norman S. Derworiz, Winnipeg, Man.

Provision of children's chairs in small air terminal buildings. \$25 award . . . Mrs. Lucia D. Hoksbergen, Gay Hill, Man.

Standardization of search and rescue alerting procedures. \$50 award . . . Peter M. Matley, Alert Bay, B.C.

Protective shields on power supplies of Radar Bright Equipment. \$75 award . . . Raymond M. Mareschal, Ottawa, Ont.

Replacement of original Radicon gears on T-1 baggage conveyor at Toronto International Airport with Dodge gears. \$300 award . . . Frederick Stuart Crane, Toronto, Ont.

Warning sign for use in mist conditions at power plant cooling towers. \$20 award . . . Rudolph Brandle, Toronto, Ont.



You can't plow a field by turning it over in your mind.

Ce n'est pas à y penser seulement qu'on laboure un champ.

Attention drawn to potentially dangerous feature on 1KW and 5KW transmitters. \$80 award . . . Brian R. W. Tughan, Ottawa, Ont.

Reporting of dew point temperatures in synoptic code. \$25 award . . . Peter A. Neville, Maniwaki, Que.

Substitute relay with pins rewired by manufacturer. \$45 award each . . . Raymond J. Sorokowsky and Lorne K. Fehr, Woodbridge, Ont.

Design of improved ledger sheets for work projects. \$25 award . . . Mrs. S. G. M. Chitouras, Ottawa, Ont.

Installation of bulk storage tank for gasoline. \$25 award . . . Herbert Adrian, Dease Lake Radio Met. Station, Watson Lake, Yukon.

Checking percentage of A. M. modulation. \$15 award . . . D. Boucher, Trois-Rivières Radio, Cap-de-la-Madeleine, Que.

Installation of drawers in Phillips Marine and Aeradio Consoles and placing of "catch" on a mounting hook for minimum thermometer. \$30 and \$10 awards . . . Sven G. R. Almer, Ucluelet, B.C.

Modifications to Control Console of Air Traffic Control System. \$50 award . . . Herman W. Gough, Riverview Heights, N.B.

Suggesting of questions with multiple choice answers for examination papers for Amateur and Advanced Amateur Certificates. \$25 award . . . Jean Marc Demers, Ottawa, Ont.

Modification to test set generator in Phillips and Northern Radio Communication Control Systems. \$200 award . . . Gordon I. Wilson, Edmonton, Alta.

Two-way portable radios for personnel working on or near airport runways. \$40 award . . . Arthur J. Smith, Fort St. John, B.C.

Use of safety belt with antenna ladder. \$50 award . . . Charles W. Batt, Lakeburn, N.B.

Revised A.S.T.S. Graduation Certificate. \$20 award . . . Dennis H. Bodkin, Abbotsford, B.C. ☐



# TRANS CANADA

## World Meteorological Day

*Toronto*—Canada as one of the 131 member countries which are members of the World Meteorological Organization is joining in the observance of the tenth World Meteorological Day. This year the official day is March 23 and the central theme of the event is "Meteorological Education and Training", which is particularly appropriate for the year 1970 as the United Nations has designated this year as "International Education Year".

In past years the Met. Branch and its field staff have found many interesting ways to commemorate World Meteorological Day. Many weather offices hold "open house" to give the general public an opportunity to visit their facilities and learn about meteorological services. Other weathermen have arranged displays, given talks, and prepared special articles for the press. Emphasis is increasingly turned towards international aspects of meteorology since in few other human activities is co-operation between nations so vital to a successful operation.

This year's theme will lead to a wide range of publicity activities centred on meteorological education. School children, businessmen, farmers and many other segments of our population are increasingly interested in, and concerned about, the weather, and on March 23, if past efforts are a guide, Canada's metmen will be making an outstanding effort to inform them ☐

## Journée météorologique mondiale

*Toronto*—Le Canada, un des 131 pays membres de l'Organisation météorologique mondiale, s'apprête à célébrer la 10<sup>e</sup> Journée météorologique mondiale, le 23 mars. «Éducation et formation météorologique» est le thème de la Journée. Le choix est particulièrement opportun puisque l'année 1970 a été désignée par les Nations Unies comme «Année internationale de l'éducation».

Ces dernières années, la Direction de la météorologie et ses bureaux régionaux ont eu recours à plusieurs intéressants moyens de commémorer cette Journée. Nombre de centres météorologiques ont ouvert leurs portes pour permettre au grand public de

visiter leurs installations et mieux connaître les services de la météo. D'autres centres ont organisé des expositions, donné des conférences et publié des articles.

Les services de la météo accordent aujourd'hui une importance accrue aux aspects internationaux de leurs travaux, puisque la coopération entre les différents pays est essentielle dans ce domaine.

Le thème choisi pour cette année donne lieu à toute une série de mesures publicitaires visant l'éducation du public en matière de météorologie. En effet, tant les écoliers et les hommes d'affaires que les agriculteurs et les autres classes de la population du Canada accordent un intérêt toujours accru au temps. Le 23 mars, si les efforts passés peuvent servir d'indication, les météorologistes du Canada réussiront à mieux les informer encore ☐



Dennis Myrthu

## Radar Controller honoured

*Calgary*—Dennis Myrthu, a quick-thinking D.O.T. controller at McCall Field, was honoured recently for his part in saving the lives of two flyers whose light plane crashed near Calgary early last year.

Through quick action and expertise, Mr. Myrthu was able to guide an experienced all-weather pilot to the exact location of the crash.

Extreme cold temperatures existed in the area at the time and the chill factor was reported to be near 50 degrees below zero.

It is doubtful the pair would have survived had there been a delay, said Chinook Flying Services president, Jim Attershaw, in presenting Mr. Myrthu with a certificate of appreciation.

"His great alertness and appreciation of the possible consequences of delay evidently spurred him on to immediate action," said Mr. Attershaw ☐

## Personnel Conference

*Saint John, N.B.*—The Public Personnel Association will be holding their second Canadian Region Conference in Saint John, N.B., June 7 to 10, 1970. Formed last year in Toronto as an organization separate from the U.S. body, the Association is inviting anyone in government service interested in personnel work to attend the conference.

In addition to seminars and lectures the conference will feature golf, tours of the area, and a real down east lobster dinner. The ladies will not be forgotten with sight-seeing and shopping tours. Entertainment will be sponsored by the City of Saint John and the Province of New Brunswick.

The host committee will be happy to supply rates and further information. Write P. O. Box 99, Saint John, N.B. ☐

## Conférence du personnel

*Saint-Jean (N.-B.)*—La deuxième Conférence régionale canadienne de l'Association du personnel des services publics aura lieu à Saint-Jean (N.-B.) du 7 au 10 juin 1970. L'Association, organisation distincte de celle des États-Unis et constituée l'année dernière à Toronto, invite tous les employés de l'État intéressés à l'administration du personnel à assister à la conférence.

En plus des séances d'étude et des causeries, il y aura des parties de golf, des visites de la région et un dîner au homard dans la vraie tradition de l'Est. Les dames n'ont pas été oubliées: des excursions leur permettant aussi de faire des emplettes seront organisées à leur intention. La ville de Saint-Jean et la province du Nouveau-Brunswick se chargent des divertissements.

Le comité d'accueil se fera un plaisir de vous communiquer les tarifs ainsi que tout autre renseignement; écrivez à case postale 99, Saint-Jean (N.-B.) ☐

# ANNUAL REPORT

by Thomas E. Appleton

The Annual Report of the Department of Transport has now become a crisply produced paperback with bright covers and some 30-31 pages of factual reporting. Financial and statistical information is leavened somewhat by well chosen charts and illustrations, the production as a whole providing a concise account of our widespread activities. However, it was not always thus.

When the Hon. Peter Mitchell presented the First Annual Report of the Department of Marine and Fisheries in 1868, the time honoured salutation to the Governor General "... May it please Your Excellency. ..." preceded 115 pages of descriptive matter and a few tables and appendices in a handsome leather-bound volume. The Second Report of 1869 did much better with 275 pages, after which the tide of closely-printed words began to flow in earnest.

In 1874 the yearbook swelled to nearly 1600 pages of text, quite unrelieved by anything so flippant as pictures. A record was reached in 1880 when the Department story was told in a saga of about 1800 pages, well constructed on the whole, but with massive detail of little Parliamentary interest. On the other hand for the historian these early reports are priceless in view of their wide range of accurate observation.

During the First World War the Annual Report had shrunk greatly in size and the staff members who had previously produced it were fighting in the trenches of the Somme and Paschendaele. In 1917 the printed portion was down to 117 pages, and was apparently too scanty for the dignity of the "Printer to the King's Most Excellent Majesty", who augmented it by adding an equal amount of completely blank pages. The House was otherwise occupied in that tragic year and was in no mood to notice this Parliamentary placebo.

By 1924 the style of reporting had become quite highly statistical, but the persistent reader might still be charmed by occasional calm patches of interesting trivia. The following narrative from Sable Island must surely be a record in the production of useless information for the hard-pressed Member of Parliament:

"Shingled the north side of horse barn and patched other sheds at Main Station. Number 4 and Number 3 did considerable shingling about their stations. Horse barn had a manure pen inside of barn. Had manure hauled away to fields. Thoroughly cleaned out pen, tore out lining and floor, making a large horse stall out of it. The manure is now gathered up and shovelled out through a hatch clear of the barn."



WANT SOME GOOD READING?—Information Services typist Marjolaine Dutrisac, left, looks over the 31-page 1968-69 Annual Report of the Department of Transport, while stenographer Lurlene Miller seems puzzled with the bulk of the 1,800 pages of the 1880 Annual Report of the department, then Marine and Fisheries.

The writer of this Report was quite properly *recording* his year's work to his superior. Whoever had forwarded it to Ottawa for publication must have had a gentle sense of humour and satire ☐

## LE RAPPORT ANNUEL

par Thomas E. Appleton

De nos jours, le Rapport annuel du ministère des Transports est une brochure bien préparée renfermant de 30 à 31 pages d'information utile. Des illustrations bien choisies tranchent quelque peu sur la monotonie des renseignements financiers et statistiques, et l'ensemble, quoique concis, donne une excellente idée de l'étendue de notre activité.

Il n'en a toutefois pas toujours été ainsi. Lorsqu'en 1868, l'hon. Peter Mitchell présenta le premier rapport annuel du ministère de la Marine et des Pêches, la saluta-

DE 1880 À NOS JOURS—Ces deux charmantes employées de la Direction de l'information nous font voir certains exemplaires du Rapport annuel du ministère des Transports. A droite, Mlle Lurlene Miller, nous montre le rapport annuel de 1880, un volumineux document de 1,800 pages. A gauche, Mlle Marjolaine Dutrisac, scrute les quelque trente pages que renferme la version bilingue de 1968-1969.

tion consacrée au gouverneur-général «Plaise à votre Excellence ...» précédait 115 pages de matière descriptive et quelques tableaux et appendices, le tout dans une riche reliure de cuir. Le deuxième rapport, en 1869, damait le pion au premier avec 275 pages, et le volume d'encre continua d'augmenter par la suite.

En 1874, l'annuaire était composé de près de 1600 pages, et, évidemment, aucune illustration n'allégeait le texte. C'est toutefois en 1880 que le record fut établi, alors que l'histoire du ministère devint une véritable épopée d'environ 1800 pages, en général bien rédigée, mais constituée surtout de menus détails de peu d'intérêt pour le Parlement. La valeur de ces premiers rapports pour les historiens est toutefois incalculable, à cause de la grande variété d'observations précises qu'ils contiennent.

Lors de la Première grande guerre, le volume du rapport annuel avait déjà beaucoup diminué, comme le personnel normalement préposé à la rédaction se battait dans les tranchées de la Somme et de Paschendaele. La partie imprimée ne comptait plus en 1917 que 117 pages, apparemment trop peu pour la dignité de «L'Imprimeur de Sa Très Excellente Majesté le Roi», qui eut recours à un brillant stratagème, celui d'ajouter un nombre égal de pages sans texte. La Chambre avait d'autres préoccupations pendant cette année tragique, et n'était certainement pas d'humeur à apprécier cet artifice parlementaire.

(suite à la page 23)



## M. J. Clodman

M. J. Clodman a été nommé surintendant de la Section des recherches sur les prévisions à la Direction de la météorologie du Canada. Cette section a été créée dernièrement pour fournir des services de soutien au système de prévisions des Services météorologiques du Canada dans les domaines de la recherche et du développement. La Section se compose de quatre sous-sections: la sous-section des recherches sur les prévisions dynamiques chargée des recherches et du développement sur la prévision météorologique numérique et la prévision dynamique; la sous-section des recherches sur la prévision à moyenne échelle, qui étudiera la mésoclimatologie et la météorologie aéronautique; la sous-section des recherches sur l'amélioration des prévisions chargée de la recherche et du développement en collaboration avec les bureaux de prévisions; et la sous-section des services d'observation, qui dirigera quelques installations d'observation, notamment le laboratoire des données sur les satellites ☐

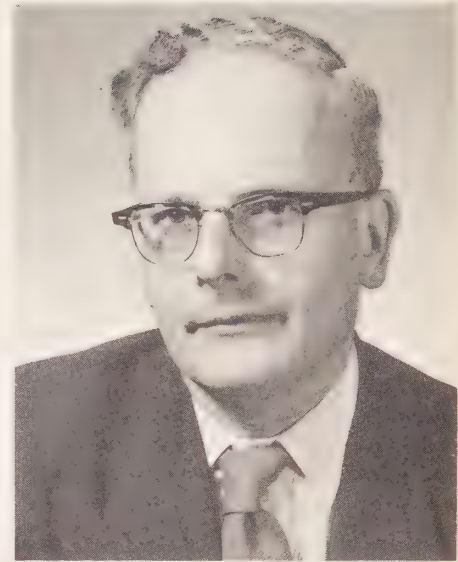


Dr. J. Clodman

## Superintendent of Forecast Research

Dr. J. Clodman was recently appointed Superintendent of the Forecast Research Section in the Research and Training Division of the Meteorological Service of Canada.

This Section is newly created to provide research and development support for the Canadian Weather Services Forecast System. The Section is composed of four Units: Dynamic Prediction Research Unit to carry out research and development on NWP and dynamic forecasting Mesoscale Prediction Research Unit which will study mesometeorology and aeronautical meteorology; Forecast Development Research Unit which will carry out R. & D. in support of forecast office activities; and the Observational Services Unit which will operate a number of observational facilities including the Satellite Data Laboratory. Research in micrometeorology, cloud physics, radiation, atmospheric circulations, etc. will continue to be carried out in the Atmospheric Research Section of the Canadian Meteorological Service ☐



W. P. Dagger

## New Librarian

W. P. Dagger, the new Departmental Librarian, arrived on December 1 from McMaster University, where he was in charge of the Science and Engineering Library. Previously he was with the Defence Research Board as Documents Librarian and Deputy Director (Administration) of their Directorate of Scientific Information Service ☐

## Nouveau bibliothécaire

M. W. P. Dagger, le nouveau bibliothécaire du ministère, est entré en fonctions le premier décembre. Il était auparavant chargé de la bibliothèque des sciences et du génie à l'Université McMaster. Précédemment, il était bibliothécaire chargé des documents au Conseil de recherches pour la Défense ainsi que sous-directeur (administration) du directorat de l'information scientifique ☐

## Superintendent of Pilotage

Captain A. D. Latter, 40, was recently appointed Superintendent of Pilotage. He had been acting superintendent following Pilotage Captain D. R. Jones being assigned to special duties.

A native of Nova Scotia, Captain Latter obtained his professional Certificates of Competency from the Marine Navigational School, Halifax. He joined the Department of Transport in 1961 as District Supervisor of Pilotage, Halifax, and was promoted to Superintendent Pilotage Operations, Ottawa in 1965 ☐

## Surintendant du pilotage

Le capitaine A. D. Latter, âgé de 40 ans, a été récemment nommé surintendant du pilotage. Il agissait comme surintendant intérimaire depuis un an, le capitaine D. R. Jones étant affecté à des fonctions spéciales.

# Maritimes Winner of D.O.T. Scholarship

At a luncheon held at Acadia University, Wolfville, Nova Scotia, F. M. Weston, Regional Director Marine Services, Maritimes, presented Miss Evelyn Williams with a \$500 D.O.T. Scholarship Award. Miss Williams, elder daughter of R. G. Williams, District Supply Officer, Saint John Marine Services Base, is currently studying at Acadia University towards a Bachelor of Music degree.

Music is almost a way of life with Lyn Williams, who has performed in both vocal and piano classes in the Simonds Music Festival and the New Brunswick Competitive Festival of Music for the last 11 years.

She has won scholarships in both sections.

Lyn also played clarinet, tuba, sousaphone and French horn in the junior and senior high schools which she attended. She has taught piano, sang in both junior and senior church choirs and has acted as church organist.

Her high school activities have included participation in the Red Cross, Keyettes and editor of the school paper in grade 11, which enabled her to win her social letter with distinction in the same year. At graduation she stood fourth in a class of 275 students □



**SCHOLARSHIP WINNER**—From left: Prof. Janis Kalejs, Acadia Dean of Music, R. G. Williams, Miss Evelyn Williams, F. M. Weston, RDMS, Maritimes. (Photo by G. E. Wood, Wolfville, N.S.)

## Le rapport annuel

(suite de la page 21)

En 1924, bien que les données statistiques aient alors commencé à dominer le rapport, le lecteur consciencieux pouvait encore y rencontrer quelques bribes d'information intéressantes pour la petite histoire, mais inutiles pour des députés débordés de travail.

Le récit suivant provient de l'île de Sable est un modèle du genre:

«Recouvert de bardeaux le côté nord de l'écurie et réparé les remises à la station principale. Le numéro 3 et le numéro 4 on dû remplacer une bonne partie des bardeaux autour de leurs stations. Il y avait un enclos pour le fumier à l'intérieur de l'écurie; fait épandre le fumier dans les champs; nettoyé l'enclos à fond, enlevé le faux plancher et le plancher, de façon à faire une grande stalle à chevaux. Le fumier est maintenant amassé et pelleté hors de la grange par une demi-porte.»

L'auteur avait, très régulièrement, fait à son supérieur un rapport fidèle de son travail au cours de l'année. Celui par contre qui envoya cette perle à Ottawa, où par la suite elle fut publiée, avait certes un certain sens de l'humour et de la satire □

## BEWARE THE DRIVER!

Covered bridges have initiated many legends and romances in the past. They were often referred to as "kissing bridges" because, before the automobile, courting couples could steal an unseen kiss as the horse plodded across the boards. But if the horse automatically stopped inside the bridge without command, beware the driver, girls were warned! □

## DEPARTMENT EMPLOYEE ACTS FAST IN RESCUE

Victoria—"I wouldn't want to go through that again," was the comment of Bob Powell of Victoria who was pulled from the icy waters off Sidney Spit one day last October by a Central Saanich couple, Doug and Dorothy Fink of 7036 East Saanich Road. Mr. Fink has been with the department for many years. He is currently employed as a Presentation Technician at the Victoria Weather Office.

Bob, 22 and his brother Ben had been out in a speed boat when the boat suddenly overturned and the two were thrown into the water. Ben was able to swim to shore, while Bob clung to a floating gas can.

"I had too many clothes on and was afraid I wouldn't make it, he said.

His brother's call for help was heard by Dorothy Fink who, with her husband, had just returned from hiking along the spit.

"I was in the cabin of the boat by then and didn't hear a thing," said Mr. Fink. "Luckily my wife was still out on the dock and after a minute recognized the call for help. We started up our engine and went around the point to the other side of the lagoon where the fellow was yelling and pointing."

The Finks then saw Bob in the water, 50 to 60 feet offshore and went to him. Because of the high freeboard on their boat they had trouble pulling him out of the water, but as the boat drifted in to shore they were assisted by Bob's brother.

The brothers were taken in the Fink's boat to the Van Isle Marina and upon arrival conveyed to Rest Haven Hospital by Sidney volunteer ambulance.

Bob was admitted to the hospital and was released after treatment for exposure. □

## Retirements in Department

R. Abram, Masset, B.C., Nov. 1, 1969—15 years.

G. D. Cantwell, Prince Rupert, B.C., Nov. 22, 1969—9 years.

J. Cardin, Sorel, P. Q., Dec. 24, 1969—47 years.

L. J. Duquet, Quebec, Nov. 8, 1969—10 years.

W. M. Elliott, L'Anse Amour, Labrador, Nfld., Feb. 4, 1970—16 years.

H. J. Farmer, Victoria, B.C., Dec. 30, 1969—14 years.

F. T. Hughes, Winnipeg, Jan. 1, 1970—29 years.

J. E. Kelsey, Yarmouth, N.S., Jan. 28, 1970—14 years.

D. MacAulay, Vancouver, B.C., Dec. 16, 1969—19 years.

G. S. McFarlane, Victoria, B.C., Nov. 29, 1969—10 years.

H. J. Moore, Dartmouth, N.S., Dec. 13, 1969—42 years.

B. Pelley, Georges Brook, Nfld., Nov. 25, 1969—17 years.

C. R. Richard, Halifax, N.S., Nov. 25, 1969—10 years.

Chesley G. Thomas, Rivière St. Paul, P.Q., Oct. 1, 1969—30 years.

C. A. Thompson, Qualicum Beach, B.C., Dec. 19, 1969—9 years.



# Transport ALBUM des Transports



The Canadian Coast Guard Ship *Montmorency* is a lighthouse and buoy tender built in 1957. Originally based at St. John's, Newfoundland, it was recently transferred to Parry Sound to replace the CCGS *C. P. Edwards*.

LENGTH: 165 feet  
BREADTH: 34 feet  
DRAFT: 11 feet  
POWER: Diesel 1,200 SHP  
GROSS TONNAGE: 751 tons

Ce navire de la Garde côtière canadienne est un baliseur qui sert également au ravitaillement des phares. Sa construction a été achevée en août 1957. D'abord attaché à la base de Terre-Neuve, il a été récemment affecté à la base de Parry Sound en remplacement du *C. P. Edwards*.

LONGUEUR: 165 pieds  
LARGEUR: 34 pieds  
TIRANT: 11 pieds  
PUISSANCE: Diesel 1,200 cva  
JAUGE BRUTE: 751 tonnes

# TRANSPORT

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# CANADA



JULY-AUGUST • 1970 • JUILLET-AOÛT



TRANSPORT is a staff magazine published by the Information Services Division, Ministry of Transport, Ottawa, Canada, under the authority of the Minister.

Editor A. Victor Bushe

THE QUEEN'S PRINTER, OTTAWA, 1970

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Rédacteur français Edouard Deslauriers

L'IMPRIMEUR DE LA REINE, OTTAWA, 1970



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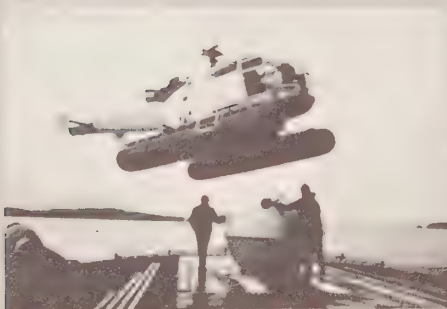
### MINISTRY OF TRANSPORT

In the next issue of "Transport Canada" we will give you an outline of the four objectives of the new Ministry of Transport—primary, operational, regulatory and development. At the same time we will introduce to you the people who, with Transport Minister Don Jamieson, will be responsible for ensuring that the Ministry meets these objectives. \*

### MINISTÈRE DES TRANSPORTS

Dans le prochain numéro de la revue «Transport-Canada» paraîtra un article donnant un aperçu des quatre objectifs du nouveau ministère des Transports: objectifs en matière de fondement, d'exploitation, de réglementation et de développement. Parallèlement, vous seront présentées les personnalités qui, sous la direction du ministre des Transports, l'honorable Don Jamieson, ont pour tâche de permettre au ministère d'atteindre ces objectifs.

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The Victoria Marine Agency in its light station landing operations has been making good use of the slinging capabilities of the Alouette helicopter of the Canadian Coast Guard. When the cover photograph was taken the Alouette had been slinging equipment from CCGS *Camsell*. At the time the vessel had been weatherbound at Bamfield on the west coast of Vancouver Island and the aircraft flew building material some eight miles to Pachena so that the *Camsell* could proceed. (Victoria Marine Agency photo).

Lors de ses opérations de déchargement aux stations de phare, l'Agence de la Marine de Victoria a fait bon usage des moyens de transport par élingue de l'hélicoptère Alouette de la Garde côtière canadienne. Lorsque la photo-couverture fut prise, l'Alouette transportait de l'équipement du n.g.c.c. *Camsell*. Le navire, à ce moment-là, était retenu à Bamfield, sur la côte ouest de l'île de Vancouver, à cause du mauvais temps et l'aéronef a transporté des matériaux de construction sur une distance d'environ huit milles jusqu'à Pachena afin de permettre au *Camsell* de poursuivre sa route. (Photo de l'Agence de la Marine de Victoria).

## Latest contribution to the art of weather reporting



MARS—short for Meteorological Automatic Reporting Station—is one of the latest contributions to the art of weather reporting. The first of five MARS now in operation across Canada was installed on the Alaska Highway near Liard River, B.C.

Data measured at the site, 134 miles from Watson Lake, Y.T., is transmitted to Toronto as a part of the information which is gathered from hundreds of reporting stations to make weather forecasting possible.

The MARS, designed by the Meteorological Branch, measures and reports cloud cover, visibility, temperature, dewpoint, wind speed and direction, atmospheric pressure and precipitation. Each of these parameters is continually measured and values are stored in the memory bank at the site.

At hourly intervals the computer-controlled teletype system which inter-connects all the weather reporting stations across Canada calls the MARS station and relays the information to locations where it is needed for forecasting or for up-to-date reports on local weather for aviation.

The MARS at Liard River is fully automatic, and is operated and maintained by Ministry technicians at Watson Lake, who normally visit the station once every two weeks. MARS is the forerunner of a family of automatic weather stations which can be used in isolated areas, and which will be a necessary and valuable aid to development of the North.

MARS CALLING! —Ministry of Transport antenna, left picks up aircraft radio calls in the vicinity of the MARS station at Liard River. In the background, at right, is CNT's microwave tower that carries weather data from the MARS site.

ICI MARS!—L'antenne du ministère des Transports, à gauche de l'illustration, peut capter des messages radio de la station MARS à Liard River. A l'arrière-plan, à droite, on aperçoit le phare hertzien du CNT qui transmet les prévisions atmosphériques en provenance de la station MARS.

Canadian National Telecommunications is the agency that plugs this newcomer into the national weather network. CNT's job is strictly that of a carrier. Nevertheless, it supplies the diesel generated power for the Ministry equipment at the unmanned site and also plows out the access road for use by its own and the Ministry's technicians who inspect and service the equipment periodically.

It is the genius of the computer age that the radio engineers have been able to "quantize" the readings of the various instruments at the unattended MARS station and convert them to digital signals capable of operating a standard weather teletype machine.

Ingenious as are the sensors used to secure the information from the various pieces of equipment and the devices used to translate them into usable form, none is more intriguing than the precipitation gauge developed by the Meteorological Branch.

How do you measure snowfall—and

winters are long in the Yukon—for instance? At the new MARS station it falls into a metal container and is melted. Precipitation causes the container to overflow into a second container. Here it is measured and reported in hundredths of inches.

When the Ministry of Transport installed the new station it also installed a non-directional radio beacon on the site to aid aircraft navigation. Co-located with the beacon are UHF radio transmitters and receivers tuned to aircraft communication frequencies. This equipment is remototed through the facilities of CNT to the Aeradio Station at Watson Lake where radio operators are available on a 24-hour basis to handle the necessary communications. An aircraft in the vicinity of Liard River thus has excellent radio contact in case of need.

Accustomed as they are to telemetry in this northern area where gas wells are remotely controlled by means of CNT radio networks, inspectors still shake their heads at MARS. Like its name, it's a little bit out of this world. □





ICEBREAKER DWARFED BY MANHATTAN—CCGS Louis S. St-Laurent, the Canadian Coast Guard's largest and most powerful icebreaker, appears rather diminutive as she sits beside the huge tanker whose bow rests high on ice at the entrance to Pond Inlet

Le «petit» LOUIS S. SAINT-LAURENT!—Le LOUIS S. SAINT-LAURENT, le plus grand et le plus puissant brise-glace de la Garde côtière canadienne fait figure de nain à côté de l'immense pétrolier dont la proue surmonte fièrement les glaces à l'entrée de Pond Inlet

## Tough Arctic ice tests for "Louis S. St. Laurent"

The Canadian Coast Guard icebreaker *Louis S. St. Laurent* is now back at her base



MASTER OF THE ICE—CCGS *Louis S. St-Laurent* is seen making her way through the ridging snow-covered icepacks of northern Baffin Bay. In some of the many heavy pressure ridges encountered during the 1970 *Manhattan* voyage to the Arctic, ice depth extended to more than 20 feet

MAÎTRE DES GLACES—Le LOUIS S. SAINT-LAURENT se fraie ici un chemin dans les immenses champs de glaces enneigés du nord de la baie de Baffin. A certains endroits, où la pression des bancs de glace se faisait plus forte durant ce deuxième voyage du MANHATTAN dans l'Arctique, l'épaisseur des glaces pouvait atteindre jusqu'à 20 pieds et plus

in Dartmouth after successfully completing a two-month winter voyage in the ice-cluttered waters of the Arctic. The *St-Laurent* accompanied the American supertanker *SS Manhattan* on her second voyage to the North. For both ships, it was their first real encounter with the tough, hard winter ice of the Arctic. All the way to northern Baffin Bay, near Thule, and then west to Lancaster Sound and along the eastern coast of Bylot Island to Pond Inlet, the pace was slow. With very few leads opening before them, both ships had to ply their way through heavy ice, generally four to six feet in thickness. They would often come to a full stop when attempting to ram through the numerous pressure ridges with their walls of ice extending to a depth of 20 feet or more. The *St-Laurent's* performance in these difficult situations drew high praise from the *Manhattan's* officers and crew.



MANHATTAN TRAPPED IN HEAVY ICE—Photo shows the *Manhattan* trapped in heavy ridging ice in northern areas of Baffin Bay. CCGS *Louis S. St-Laurent*, in background, later moved in alongside the *Manhattan* to ease the pressure and allow the tanker to get underway again

Le MANHATTAN immobilisé par les glaces—Nous voyons ici le pétrolier MANHATTAN prisonnier de bancs de glaces dans les régions nordiques de la baie de Baffin. Apparaissant à l'arrière-plan sur la photo, le LOUIS S. SAINT-LAURENT devait s'avancer près du pétrolier afin de diminuer la pression des glaces et de permettre au MANHATTAN de poursuivre sa route

ICEBERG AHEAD!—*SS Manhattan* is shown here as she skirts the edge of a huge iceberg in northern Baffin Bay during her 1970 voyage to the Arctic

ATTENTION A L'ICEBERG!—Le pétrolier *Manhattan* contourne ici un immense iceberg dans le nord de la baie de Baffin lors de son dernier voyage dans l'Arctique au mois d'avril 1970

Ministry of Transport Photos  
Photos du ministère des Transports

# Un rude test pour le "Louis S. St-Laurent"

Le brise-glace canadien *Louis S. St-Laurent* est de retour à sa base de Dartmouth après avoir complété avec succès un voyage de deux mois dans les vastes champs de glace de l'Arctique. Le *St-Laurent* accompagnait le pétrolier américain *Manhattan* dans son second voyage d'essais dans le Grand Nord. Pour les deux navires, il s'agissait de leurs premiers tests réels dans les rigides glaces de l'hiver arctique... des glaces de formation toute récente et d'une épaisseur allant de quatre à six pieds. Le trajet s'est effectué à pas de tortue jusqu'au nord de la baie de Baffin et de là, à l'ouest, en direction de Lancaster Sound et le long de la côte est de l'île Bylot jusqu'à Pond Inlet. Dans les nombreux bancs de glace formés sous pression, lesquels atteignaient parfois une épaisseur de 20 pieds et plus, on se butait à des obstacles quasi infranchissables. Les officiers et membres d'équipage du *Manhattan* ont à maintes reprises fait état de l'aise avec laquelle le *St-Laurent* parvenait à tirer les navires de ces situations difficiles.



UNE SCÈNE TYPIQUE DE L'ARCTIQUE—L'un des deux hélicoptères de la Garde côtière canadienne qui étaient à bord du LOUIS S. SAINT-LAURENT durant ce voyage dans l'Arctique avec le MANHATTAN, retourne au brise-glace après avoir accompli un vol de reconnaissance des glaces dans la région de Pond Inlet

TYPICAL ARCTIC SCENE—A Canadian Coast Guard helicopter, one of two carried by CCGS *Louis S. St-Laurent* during her 1970 voyage to the Arctic with the *Manhattan*, is seen returning to the ship after completing an ice reconnaissance tour in the Pond Inlet area



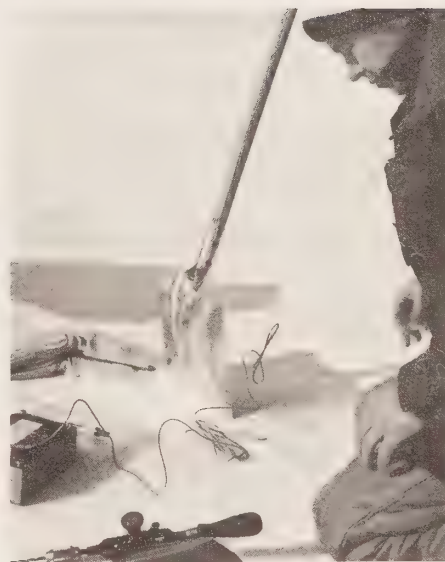
LA SOUPAPE-VANNE JAMIESON—Ce dispositif, surnommé «soutape-vanne Jamieson» par l'équipage du MANHATTAN, constitue une mesure de sécurité par laquelle la cargaison d'huile du pétrolier aurait pu être pompée dans un autre navire dans le cas où le MANHATTAN aurait rencontré des difficultés imprévues

JAMIESON VALVE—These installations, dubbed "Jamieson valves" by the crew of SS *Manhattan* are a safety precaution designed to provide a ready valve through which oil from the tanker could be pumped to another vessel should the tanker encounter unforeseen difficulties



DES HOMMES-GRENOUILLES DANS L'ARCTIQUE—Des officiers à bord du LOUIS S. SAINT-LAURENT, spécialement formés pour la plongée sous-marine dans l'Arctique, se préparent à descendre le long de la poupe du MANHATTAN afin de vérifier l'état des hélices de l'immense pétrolier. On a fait cette vérification à maintes reprises au cours de ce voyage

SKINDIVERS' IN THE ARCTIC—Officers of the *Louis S. St-Laurent*, specially trained skindivers for Arctic operations, are heading towards the stern of the *Manhattan*, where they will go down to inspect the screws of the huge tanker. This skin diving operation was conducted on numerous occasions during the voyage



ÉTUDE DES GLACES À POND INLET—Lynn Colby, un spécialiste des glaces auprès de l'Étude du plateau continental polaire au ministère des Mines, de l'Énergie et des Ressources, vient de perforer un trou dans quatre pieds de glace arctique près de Pond Inlet afin d'en retirer un échantillon qu'il coupera en plusieurs morceaux dans le but de recueillir certaines données sur la structure de la glace, la température, l'épaisseur, la salinité et certaines autres informations pertinentes

ICE TESTS IN POND INLET AREA—Lynn Colby, an ice specialist with the Polar Continental Shelf Project of the Department of Energy, Mines and Resources, has drilled a hole into some four feet of Arctic ice near Pond Inlet and drawn a core. The core is cut into several sections for the gathering of data on ice structure, temperatures, depth, salinity and other related information





**TAKING FLYING TESTS**—Matthias Mitchell, a Cree from Fort Severn on Hudson Bay, is the first Indian to take flying tests at the Stratford Festival City Air Park. The Ministry of Transport official who presided over the test writers was Mrs. Luba Yankowich. (Free Press Stratford Bureau Photo).

**ESSAIS DE VOL**—Matthias Mitchell, Cri de Fort Severn, sur la baie d'Hudson, est le premier Indien à faire des essais de vol à l'aéroport de Stratford (Stratford Festival City Air Park). Le représentant du ministère des Transports qui présidait les épreuves des participants était Madame Luba Yankowich. (Photo du bureau de la *Free Press* à Stratford).

## WOMAN SUPERVISES CLASSES TAKING PILOT LICENCE TESTS

Ontario's only woman pilot-examination classroom supervisor and a young Cree from Fort Severn on Hudson Bay who hopes to be the first Indian commercial pilot in the north, met at the Festival City Air Park in North Easthope Township, Stratford, Ont.

Mrs. Luba Yankowich, on the staff of the Ministry of Transport, Ontario region, and office manager of air regulations for the Ontario region at Toronto, presided over a class of about 20 students writing private pilot tests.

And among the students was Matthias Mitchell, from Fort Severn.

Wind swirled up clouds of snow that prevented aircraft from taking off or landing at the airport in North Easthope Township at the northerly outskirts of Stratford, but the students were able to see hundreds of miles on charts as they plotted courses as part of their examinations.

Mrs. Yankowich has been with Transport for 18 years and has been presiding over examination sessions for six years. She usually travels by aircraft to the test sites.

On that day she didn't fly. She drove to Stratford, where she has been presiding over tests periodically for about four years.

"And every time I come here I always manage to be in the middle of a blizzard," she said.

In Stratford, less than two miles away, there was no blizzard, but in North Easthope the wind had picked up drifting snow and reducing visibility to a few yards in places.

Mrs. Yankowich says she is not a department inspector, just an examination supervisor who sits and watches.

She presided over her first classroom in a North Easthope Township schoolhouse

four years ago and "I walked in snow up to my knees getting in", she recalled. The schoolhouse was closed and pupils were transferred to a township area central school. Even the water supply was cut off, she said.

Mrs. Yankowich says she just "brings the examination papers," and explains to student pilots what they are to do. She doesn't mark papers.

She's presided over tests for private permits, commercial, helicopter, glider and heavy transport planes.

"If I'd thought of this about 20 years ago, I'd have been a pilot by now," she says. She just rides as a passenger in department planes when being transported to "school".

Examination results are usually announced to student pilots about two weeks after writing. □

(Reprinted courtesy of The London (Ont.) Free Press)

# Coast Guard College bids farewell

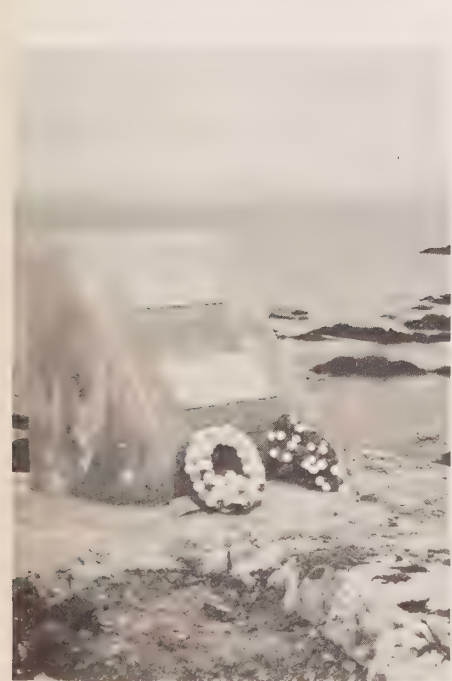
## Long distance and coastal communications

Long distance and coastal communication service has been moved from the Ministry of Transport Station, Portuguese Cove near Halifax, Nova Scotia, to a new building at the Halifax Marine Radio Operations Centre at Ketch Harbour, Nova Scotia. The Station, one of the most up-to-date in North America, is to serve shipping in Eastern waters.

Improved equipment and in-station procedures will greatly increase message traffic speed and coverage possibly beyond the North Atlantic and Caribbean to the South Atlantic and Mediterranean Sea.



## Memorial Cairn



Two plaques, one in English and the other in French, were dedicated at a ceremony at Pointe de Savoyard, St.-Pierre on April 17. The plaques are in memory of Cadet Mark Purney of the Coast Guard College. The plaques read: "In memory of Canadian Coast Guard Officer Cadet Mark Curtis Purney, age 22 years, lost here in the wreck of the "Charles-L", April 6, 1969."

Mark Curtis Purney n'est plus—C'est ce que nous rappelle douloureusement cette plaque placée sur cette stèle érigée à la Pointe du Savoyard sur laquelle on peut lire «A la mémoire de l'élève officier Mark Curtis Purney, 22 ans, perdu ici le 6 avril 1969 dans le naufrage du Charles L».

To the skirl of bagpipes playing "The Road to the Isles" and "Will Ye No Come Back Again", Captain J. Gerard Brie and family were "rowed ashore" in true nautical fashion, at a ceremony December 12, 1969. For the Captain it was the end of four and a half years at the "helm" of the Canadian Coast Guard College, Point Edward, Sydney, N.S. Here he makes his final inspection of the Cadets. Captain Brie has been designated for special training under the Public Service Commission's Career Assignment Program. (Photo by Bob Bachynsky)

Au son des cornemuses jouant «The Road to the Isles» et «Will Ye No Come Back Again», le capitaine J. Gérard Brie «a été ramené à terre» dans la vraie tradition maritime au cours d'une fête d'adieu, le 12 décembre 1969. Pour le capitaine, cette cérémonie marquait la fin de quatre années et demie à la «barre» du Collège de la garde côtière canadienne à Pointe Edward, Sydney (N.-É.). Il passe ici en revue pour une dernière fois les élèves officiers. Le capitaine Brie vient d'être choisi pour recevoir une formation spécial dans le cadre du Programme d'affectation des cadres de la Fonction publique.

**NEW DIRECTOR**—James Y. Clarke, formerly a Commander in the Royal Canadian Navy and for two and a half years attached to National Defence Headquarters, is now Director of the Canadian Coast Guard College at Sydney, N.S. Born in Montreal on March 1, 1928, Captain Clarke began his marine career with training at H.M.C.S. Royal Roads, (Victoria, B.C.) and entered the Royal Canadian Navy on July 3, 1947, following graduation from the college.

**UN NOUVEAU DIRECTEUR**—M. James Y. Clarke, anciennement commandant dans la Marine royale canadienne et qui, durant deux ans, avait été détaché de l'Etat-major de la Défense nationale, est maintenant directeur du Collège de la Garde côtière canadienne à Sydney (N.-É.). Né à Montréal le 1<sup>er</sup> mars 1928, le capitaine Clarke entreprend sa carrière maritime en suivant des cours de formation au H.M.C.S. Royal Roads, (Victoria, C.-B.) et il entre dans la marine royale du Canada le 3 juillet 1947.





# Bartlett and Wallis



## TWO OUTSTANDING NAMES IN CANADA'S SEA HISTORY



Capt. S. W. Bartlett



Capt. R. A. Bartlett



Admiral of the Fleet Sir Provo Wallis

by Thomas E. Appleton

The commissioning of the CCG Ships *Bartlett* and *Provo Wallis* at Sorel in October 1969 was a fitting commemoration of two names outstanding in the sea history of Canada. The vessels are sisterships, but the names have only this in common—each, in a different way, recalls the heroic era of marine tradition.

Robert Abram Bartlett, Master Mariner and Fellow of the Royal Geographical Society, was a Newfoundlander. Born at Brigus in 1875, he came of a seafaring family and was brought up in the hard school of fishing, sealing and Atlantic trading. On gaining his master's ticket in 1897 he joined Peary's expedition as Chief Officer of the *Windward* in which his uncle, Captain S. W. Bartlett, was sailing master. Both Bartletts, 'Bob' and 'Sam', had remarkable careers in Arctic navigation and played an important part in advancing Canadian administration in the North.

Lieutenant R. E. Peary, USN, as he then was, had previously attempted to reach the

Pole by sledging across the Greenland ice-cap but, by 1898, he had decided to undertake a series of probes by ship up the East coast of Ellesmere Island and thence by sledge. Bartlett was just the right age for this endeavour and he accompanied his leader on many journeys. In 1905 Peary was promoted to Commander and storing the *Roosevelt* with supplies for two years, he set off again with Bob Bartlett as master of the ship. The expedition experienced appalling hardships but survived after reaching 87 deg. 6 min. North by sledge in April 1906.

In 1908, again with Captain Bob as master of the *Roosevelt*, Peary sailed from New York on the voyage which would crown his career. Sledging with a party to set up a chain of supply dumps for the return trip, Bartlett trudged to 87 deg. 48 min. North, the highest latitude ever reached by man up till that time, before he regretfully obeyed the order to turn back. Peary, with his black companion Matthew Henson and

four Eskimos, was thus enabled to reach the Pole on April 6, 1909. For his part in this brilliant achievement, Captain R. A. Bartlett was awarded the Hubbard Medal of the National Geographic Society of the United States, a distinction shared by some of the world's greatest explorers.

Captain S. W. Bartlett, whose work with Peary had earned him his reputation as an ice pilot, commanded the *CGS Neptune* under A. P. Low in the first Canadian Arctic patrol of 1903-04. He later went North in other ships of the Department of Marine and Fisheries, notably the *Stanley* and *Earl Grey*.

In 1913 Bob Bartlett sailed on another memorable voyage, this time in the Western Arctic, as master of *CGS Karluk* under the greatest of modern Canadian explorers, the anthropologist Vilhjalmur Stefannson. Like Peary, Stefannson was an enthusiastic exponent of Eskimo techniques, perhaps the most devoted in history, for he lived on seals during the longest Arctic wandering

ever undertaken by a white man.

The Canadian Arctic Expedition of 1913 is an involved story, too long to tell here, but it comes into focus with the thought that the war had not started when Stefansson left the *Karluk* for a few days to recruit Eskimo hunters. It was just about over when he eventually got back to civilization, if one may use that word in this context.

Stefansson left the ship in September 1913 and Bob Bartlett was in charge of the *Karluk* when it was beset in the ice off Point Barrow. Before Stefansson could get back the ship had drifted far to the West and he was unable to rejoin. Eventually, on January 11, 1914, the *Karluk* was crushed by the pressure of ice and literally broke up under foot.

### Superb leadership

Bartlett had prepared for this eventuality and got the entire crew on to the floe in a position some 80 miles from Wrangel Island. A lesser man might well have despaired but, by superb leadership in continual darkness and temperatures of 40 below zero, most of the party were able to follow their Captain to reach Wrangel Island. By a tragic voluntary decision, the surgeon and three others perished in a separate attempt to make the Alaskan shore.

Settling his men on Wrangel as well as he could, Bob Bartlett pushed on with his faithful Eskimo Katiktovick for company, and the two of them reached Nome in Alaska after covering 700 miles along the Siberian shore in 37 days of unbelievably difficult marching. It was a feat of courage and leadership which stands alone in Canadian maritime history. And it succeeded. In September 1914, sailing North again in the U.S. Coast Guard Cutter *Bear*, Bob Bartlett picked up the survivors of the *Karluk* on Wrangel Island. In recognition of his achievements Captain R. A. Bartlett received an award from the Royal Geographical Society in 1918.

Bob Bartlett commanded United States Transport ships during World War I, and in 1928 piloted the Stoll-McCracken expedition to the Aleutians.

He took part in an expedition to Greenland in 1930. In addition, Captain Bartlett made many voyages to the Eastern Arctic, between 1926 and 1941, in his own schooner, the well known *Effie M. Morrissey*. He died suddenly at New York, in 1946 after an adventurous life which he described in several books. He was unmarried.

### An early start

The story behind the second name, also one of survival, is entirely different but equally intriguing. Provo William Parry

Wallis was a native son of Halifax, Nova Scotia, where his father was Chief Clerk of the Dockyard, or in modern terms the Supply Manager. He was born in 1791 and, by a custom by no means unusual in those days, he was entered on the books of the Royal Navy in 1795. An Able Seaman of four years and eighteen days could hardly have been expected to join his ship, but someone drew the pay and Wallis is believed to have gone to sea for the first time in 1800. A boy of nine could make himself useful and the extra book time came in handy when calculating a midshipman's seniority for the examination as Lieutenant.

With his father's modest influence and his own natural ability Wallis by 1813 was Second Lieutenant of HMS *Shannon*, the dashing frigate which defeated the USS *Chesapeake* off Boston in a famous engagement. This was a widely acclaimed victory of the 1812 War, very welcome at the time, and from Wallis's point of view extremely fortunate. His Captain was severely wounded in the action, the First Lieutenant was killed, and Provo Wallis assumed command in the way of duty and sailed into Halifax with the *Chesapeake* in prize. At once he was the hero of British North America.

As the *Shannon* was a Captain's command, Wallis was relieved after a few days, but he was specially promoted to Commander for his leadership. Even in wartime this was not bad going for an officer of 22 with only small family influence in the great world of Admiralty.

Commander Wallis was then given a sloop, but she was paid-off in 1814 and he joined the ranks of hundreds of other officers on half-pay who had been left unemployed after the war. However, the hero of the *Shannon* was a marked man whose luck held, and he was promoted to Captain in 1819, subsequently serving at sea with intermittent spells on half-pay. One great leap forward at this time became operative in his career. Up to this point promotion then was by selection but, once posted on the list of Captains, an officer automatically rose to the highest rank in the Royal Navy solely by seniority. Unless he died or was dismissed the Service by sentence of court martial, nothing could change his position on the list, although appointments to active service on full pay were another matter.

### Slow, but he made it

Slowly, Provo Wallis climbed the slippery slopes in the wake of his seniors, still numerous despite a natural attrition. Rear-Admiral in 1851, Vice-Admiral 1857, Admiral in 1863, it was a long haul, but Sir Provo Wallis was in excellent health as the

years rolled on. Then in 1870 another unlooked for stroke of luck came about. The system of promotion had so clogged the list of Admirals that it became almost impossible to make realistic appointments, and automatic promotion ceased for all except those who had commanded ships in the Napoleonic War.

It was a sound administrative decision and surely, after 55 years, there could be few who had actually been captain of a ship before 1815. Perhaps so, but their Lordships may have overlooked the young Lieutenant who had commanded the *Shannon* for a few days in 1813. By reason of that brief tenure of command in the days of his adventurous youth, Sir Provo Wallis reached the highest pinnacle of his profession in 1877 when he was promoted to Admiral of the Fleet, a rank which, by tradition, is never retired and carries full pay for life.

Admiral of the Fleet Sir Provo Wallis died in England in February 1892 in his 101st year. He was hale and hearty to the end and was admired by all who knew him. In his remarkable career he had been on the books of the Royal Navy for no less than 97 years, a record which can never be surpassed. Born two weeks before the death of Queen Anne, he died within the memory of men now living □

(Bartlett photographs from Public Archives, Ottawa, Wallis photograph from National Maritime Museum, Greenwich).

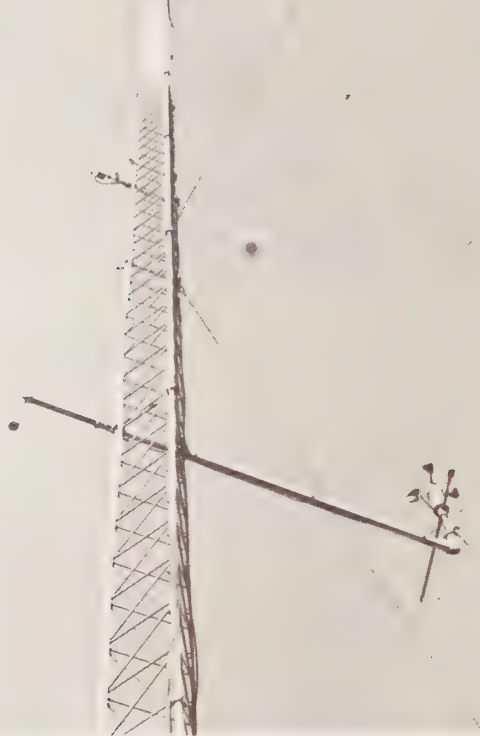
## AVALANCHE WARNING

Like our own railways in the Rockies and elsewhere, Swiss trains have avalanche problems in the Alps. Swiss engineers have beaten this danger in the great Mankin Ravine by installing a novel avalanche warning between the Mankin and Sevestein tunnels.

The device consists of an electric cable stretched along the top of the gorge some 3,000 feet from the tracks and about 1,400 feet above them. It is connected with the railway signal system and when an avalanche starts all signal lights go red.

Even if the warning goes on as the locomotive passes the signal, the system gives sufficient lead time for the last car to be out of the danger zone before the avalanche hits the tracks. This is achieved by stretching another cable at lower level to measure the speed of the avalanche □





## Network of towers provides data for studies

In recent years a great deal has been written on the causes and control of air pollution. Pure air is not easy to define. Normally, it may be considered as a mixture of several gases of which nitrogen and oxygen predominate. To these, nature adds a great variety of other constituents which are not constant in amount anywhere.

Air pollution is not a new problem. As long ago as the 14th century the widespread burning of soft coal shrouded London, England, in a blanket of choking smoke. Laws were passed banning black smoke on penalty of death, and one man was hanged for this offence. However, it was in the 19th century that pollution became a serious problem as industry expanded and cities mushroomed in size. Today pollution from smoke is not as serious as it once was, but pollution from ozone and other gases is worse than ever before.

Many harmful effects originate with air pollution. It corrodes metals, fades paint and cracks rubber tires. Soot increases laundry and dry cleaning bills. Sulphur dioxide and ozone can damage or kill trees and plants. The cost of all this is enormous, and some estimates run as high as \$40 per year for every man, woman and child in Canada.

Local influences may add such impurities as pollens, wind-blown dusts, volcanic gases, salt particles from sea-spray and others so that even country or mountain air is rarely pure in the strict sense.

The governing meteorological variables in the study of air pollution are wind (both direction and speed), turbulence and precipitation. To assist in this study a network of towers has been developed gradually during the past decade, and these towers support special instruments to measure the

vertical structure of winds and temperatures over urban areas. This network has been sponsored by the Meteorological Service, in cooperation with other government and university groups in order to provide data for air pollution studies.

### Special tower network

In the early development of the Canadian meteorological tower network, existing structures such as television transmission towers were used, but the recent trend has been to erect towers designed specifically as support to the air pollution survey. Early in 1970 the special tower network comprised about 20 locations, mainly concentrated in the heavily industrialized areas of Ontario and Quebec; for example, three towers are located in the Toronto area and Montreal collects data from two towers.

The problems arising from air pollution can be viewed as a three-part story. What kind and amount of pollution is emitted into the atmosphere? What are the concentrations of these pollutants when they reach the receptor, whether it be man, vegetation or property? What factors determine day to day changes in the relationships between the first two factors? For example, known or calculable amounts of pollution originate from heavy industry; these emissions reach the sampling instrument at a specific rate or concentration.

Meteorological factors alone are the variables which determine the emission/concentration ratios so important to assessing the extent of the air pollution problem.

### Research and control

The meteorological factors which determine the ability of the atmosphere to dilute pollution emissions to acceptable levels are wind velocities and atmospheric buoyancy. Thus, the Canadian meteorological tower network is designed to monitor these basic parameters as input to the research and control of air pollution in Canada.

Each tower is usually equipped with a continuously recording type of wind speed and direction instrument at two or more levels, one at about 20 feet above ground level and others spaced at regular height intervals to the tower top and bottom. In the normal atmosphere, temperature at low levels decreases with height; conversely, the increase of temperature with height has been called an inversion. Good atmospheric dilution rates are achieved with the normal distribution of temperature with height and poor atmospheric dilution results from inversion conditions.

*(Continued on page 18)*

## SOME INTERESTING STATISTICS

### JET AIRCRAFT 804

Scheduled jet air travel in Canada was 10 years old April 1.

On April 1, 1960, Canada entered the jet age when Air Canada DC-8 number 804 took off from Montreal for Toronto and Vancouver. Since then, the airline has expanded its fleet of Douglas jet aircraft to 20 standard DC-8s, 16 long-body DC-8s and 34 medium range DC-9s. Jets accounted for 85 per cent of total seat miles provided by the airline in 1969.

Aircraft 804 was accepted from the

Douglas Corporation on February 7, 1960, and since its history-making inaugural flight, it has logged more than 30,400 hours. During its 10 years of service, the jet has taken off and landed more than 13,850 times and travelled more than 15 million miles—more than 31 round trips to the moon.

In doing so, it has swallowed 58 million gallons of fuel worth more than \$8 million, or 25 per cent more than the original cost of the aircraft.

During take off and landings, the giant jetliner has left \$239,000 worth of rubber on runways of the world, or approximately 1,000 tire treads. It has used some \$250,000 worth of brake replacement parts. The aircraft has been subjected to 391 line checks, 75 operational checks and three major overhauls during its working history.

Cabin crews working No. 804 during the 10-year period have served approximately 875,000 meals to more than a million passengers □

## SUPREME IN INTER-DEPARTMENTAL SPORTS



Fred Lawton, centre, treasurer of the Ministry's Recreational Association, holds the J. Roy Baxter Trophy which he accepted on behalf of the Ministry of Transport. Symbolic of supremacy during the past year in inter-departmental sports competitions, the trophy was presented for the first time at the 29th annual R. A. Sports Awards Dinner on April 17. With Mr. Lawton are Ted Davies, left, touch football team, and Bruce Smith, men's curling team. The men's golf team also won an award.

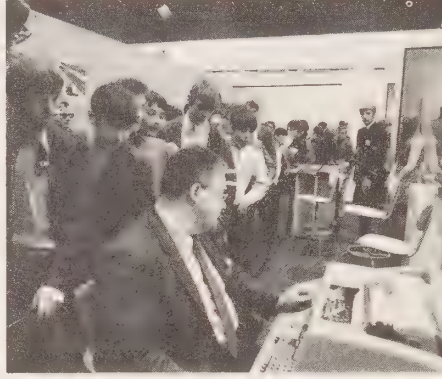
Au centre de la photo, vous voyez M. Fred Lawton, trésorier de l'Association récréative du Ministère qui tient le trophée J. Roy Baxter qu'il vient de recevoir au nom du ministère des Transports. Symbole de suprématie au cours de l'an dernier dans les compétitions sportives interministérielles, le trophée a été présenté pour la première fois au 29<sup>e</sup> banquet annuel d'attribution de trophées que l'Association récréative a tenu le 17 avril. À la gauche de M. Lawton, on voit M. Ted Davies, membre de l'équipe de football de touche et M. Bruce Smith, membre de l'équipe de curling masculine. L'équipe de golf masculine a gagné aussi une récompense.



# MAINTENANT L'AVENIR — NOW THE FUTURE



Grâce à la participation du ministère des Transports à l'Exposition «Maintenant, l'avenir» qui s'est déroulée récemment à Hull, ces jeunes en savent maintenant plus long sur la Garde côtière canadienne



Fera-t-il beau?—Cette question, beaucoup de jeunes l'ont posée à notre expert en météorologie, lors de leur visite à l'Exposition «Maintenant, l'avenir» qui s'est déroulée du 13 au 17 avril, à la Cité des Jeunes, à Hull, où le ministère des Transports avait aménagé un kiosque



Nombreux sont les étudiants des écoles secondaires de la région de Hull qui ont voulu se renseigner sur ce que l'École des Services de l'air pouvait leur offrir comme carrière lors de leur visite au kiosque du ministère des Transports durant l'Exposition «Maintenant, l'avenir»

Thanks to the participation of the Ministry of Transport in the Exhibition, which took place in Hull recently, many high school students now know more about the Canadian Coast Guard.

Many students inquired about the weather forecasts when they saw our meteorological technicians during the Exhibition.

Many Hull high school students also took the opportunity to get more information on the Air Services School during their visit to the Exhibition, which took place in Cité des Jeunes, Hull, from April 13 to 17.

## Ministry of Transport takes part in Saskatoon Careers Exposition

by Otto J. K. Schilling,  
Radio Operator, Saskatoon.

Saskatoon was the scene of a pilgrimage during March, when a total of 12,000 students from 47 urban schools (some lured from as far off as Carrot River, 240 miles northeast), and 11 Saskatoon city schools attended the Careers Exposition, the second such event to be held in the city.

Students ranging from 13 to 19 years of age were not the ones who showed the most interest in the colourful and informative exhibitions, which were designed to show not only the end achievement, but behind the scenes activities of many programs. During evening hours the Jubilee Building was crammed with adults of all ages for a grand total of 20,800 people.

The exhibitions were designed to visually depict the nature of work, qualifications necessary for entry, educational and special training required, earnings and working conditions in the various occupations.

The Ministry of Transport was one of the 56 exhibitors, with a booth staffed jointly by the Telecommunications, Meteorological and Airports branches.

An unexpected display of genuine interest was shown by the "weaker sex" in the various aspects of the Air Services. Tea-

chers, too, indicated an awareness of the role played by the Ministry of Transport in the field of aviation.

Plans are already underway for next year's exhibition, with the possibility of a more spectacular approach. □



SASKATOON CAREERS DISPLAY—Students question Ministry of Transport officers from left Larry O'Bray, Chief, Airports Emergency Service, Don Bauer, Officer-in-Charge, Saskatoon Weather Office, and Tom Keddle, Area Operations Supervisor, Telecom

EXPO-CARRIÈRES À SASKATOON—Nous voyons ici des étudiants demandant des informations à certains représentants du Ministère qui sont, de gauche à droite, MM. Larry O'Bray, directeur des Services d'urgence aux aéroports, Don Bauer, responsable du Bureau météorologique de Saskatoon et, Tom Kiddie, surveillant des opérations régionales aux Télécommunications

## *It's no bed of roses for upper (cold) air Met. men*

Devotion to duty in severe Arctic weather was demonstrated earlier this year at Cambridge Bay, N.W.T. by upper air meteorological technicians.

It was midnight on March 20, with a 30-below temperature and wind gusts of 60 m.p.h., when Bill Beveridge and Jim Patterson climbed out of bed and made preparations to go to the radiosonde building three-quarters of a mile away. It is from this building that balloons carrying radiosonde instruments are sent up to a height of approximately 100,000 feet. From the information and the signals which the radiosonde sends back to the ground, the observers compute profiles of the temperature, relative humidity and wind velocity in the upper atmosphere.

Their J5 Bombardier vehicle was outside and, with both the block heater and battery warmer plugged in, the engine started with little difficulty. However, lots of snow filled the cab and engine compartment, and, with the motor continually stalling, some three hours had passed before the technicians were able to set out for the radiosonde building.

A 12-foot snow drift had to be skirted in order to get out of the barracks area, and with visibility zero they missed the road and ended up on the tundra. Further progress was impossible. Windows on the J5 had frosted over, and it took the technicians more than an hour to find the barracks they had just left, although at no time were they more than 100 yards from it.

At 4.20 a.m. they woke O.I.C. Terry King and explained the situation to him. Terry decided they might make in on foot, so with Jim driving the J5, Terry and Bill took it in turn to walk in front and guide the vehicle.

Terry writes: "We could see 20 to 30 feet away, and, by locating the edge of the road and keeping the J5 right behind us, we arrived at our workplace in about an hour's time. Bill and Terry had been relieving each other every 10 minutes while the other warmed himself in the J5.

With great difficulty the radiosonde was finally released, and although late, upper air data filled in this gap in the world network.

The storm still raged when the sounding was completed and the three men had to use the same method to get home. Aeradio had been advised of their intentions just in case they didn't make it! □

## QUEEN OF MINISTRY OF TRANSPORT



## REINE DU MINISTÈRE DES TRANSPORTS

Honour of bearing this year's title went to 21-year-old Miss Shirley Ann Scott, who works with the Purchases and Contracts Division. Miss Scott, whose home is at RR2 Carp, Ont., enjoys snow cruising, dancing, curling, bowling and swimming. She was chosen for the title from a group of 10 finalists. The first Princess is Miss Gladys MacKinnon of the Air Services School, and second Princess, Miss Joan Langley of Personnel.

Le titre de reine du ministère des Transports a été remporté cette année par une employée de la Division des achats et contrats. Mlle Shirley Ann Scott, qui est âgée de 21 ans. Mlle Scott, dont l'adresse est RR 2, Carp (Ont.), aime les promenades en moto-neige, la danse, le curling, les quilles et la natation. Elle a été choisie parmi un groupe de 10 finalistes. Mlle Gladys McKinnon, de l'École des Services de l'Air, a été nommée Première princesse, et Mlle Joan Langley, de la Direction du Personnel, deuxième princesse.



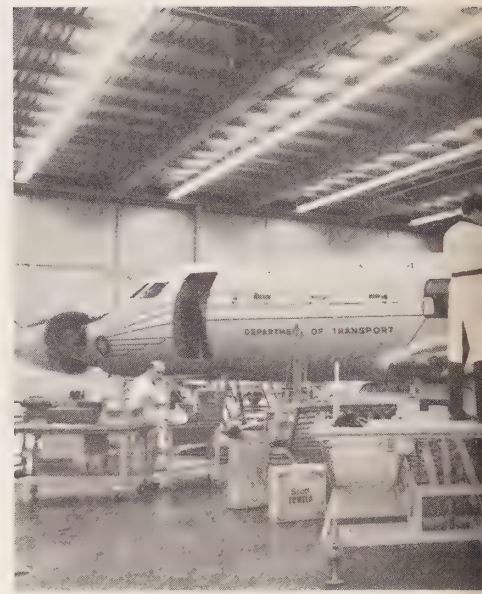


M. E. Louch and W. J. Mackenzie discuss annual check.

M. M. E. Louch et M. W. J. Mackenzie discutent de la vérification annuelle.

# MINISTRY JETSTAR GOES "IN THE DOCK"

by M. E. Louch,  
Chief, Flight Services Division,  
Civil Aviation Branch.



M. Vanderheide, a line maintenance mechanic, installing and rigging the main undercarriage.

M. M. Vanderheide, mécanicien de piste, est en train d'installer et de régler l'atterrisseur principal.



F. Levasseur, a crew chief with line maintenance, inspects flying controls.

M. F. Levasseur, chef d'équipe de mécaniciens de piste, inspecte les commandes de vol.

Once a year, in order to comply with mandatory safety requirements, a Ministry of Transport Jetstar, goes "in the dock" for its annual check. Since this complex and sophisticated aircraft is called upon for work anywhere in North or South America, all systems must be "go" at all times and it is the responsibility of maintenance to ensure this is the case. They do.

Of course, the aircraft is subject to continuous maintenance and routine checks, but the most comprehensive is the "annual" which involves some 1,200 man hours of labor.

This check involves removal of the four engines, landing gear, tail section, auxiliary fuel tanks, all inspection panels, seats, upholstery, floor boards and instrument panel. All systems and components are checked for wear, serviceability and security and all electrical wiring, hydraulic lines, pneumatic lines, oxygen systems and fire extinguisher systems are inspected and repaired or replaced where necessary.

The main fuel tanks are opened, a sonic inspection carried out to detect stress corrosion, (the fuel tanks being an integral part of the wing structure) and the interior of the tanks is checked for bacterial growth.

Pressurization tests are made and all paint, structure and upholstery are checked and repaired where required. All avionic gear, such as doppler autopilot, compass, navigation systems and approach systems, radar and mach trim compensator is removed, bench checked and any time expired components are replaced.

A system of component history records is used to order replacement parts in advance of the actual check so that all known required replacement units are on hand when the check is commenced □

For several years this complex operation was contracted out to approved Lockheed overhaul bases in the United States, but an extensive "in house" training program, coupled with factory courses for a nucleus of maintenance engineers, resulted in this work being done within Flight Services, at a substantial reduction in cost as well as a savings of out of service time □



L. Shankles, a Lockheed engineer, and D. Smith, a line maintenance mechanic, carry out an ultrasonic inspection of the integral wing tank risers.





# UN JETSTAR EN ROUTE POUR UNE VÉRIFICATION

Par le  
Chef de la division des Services de vol,  
Direction de l'aviation civile,  
M. M. E. Louch



P. Olshefsky, an aircraft mechanic with line maintenance, installs and adjusts a new rudder torque tube bearing.

M. P. Olshefsky, mécanicien à l'entretien de piste installe et règle un nouveau palier au fourreau des commandes du gouvernail.

Une fois par an, afin de satisfaire aux prescriptions obligatoires relatives à la sécurité, un Jetstar du ministère des Transports est conduit «à l'atelier» en vue de procéder à sa vérification annuelle. Etant donné que cet avion complexe et perfectionné est destiné à être utilisé dans les trois Amériques, tous les systèmes, toutes les commandes doivent être en tout temps en parfait état et il incombe au service d'entretien de s'assurer qu'il en est ainsi. C'est ce qu'il fait.

Bien entendu, l'avion est assujéti en permanence à des vérifications courantes, mais la vérification annuelle est beaucoup plus complète et implique 1200 heures de travail.

Cette vérification comprend l'enlèvement des quatre moteurs, du train d'atterrissage, de la section de l'empennage, des réservoirs à carburant principaux et auxiliaires, de tous les panneaux de visite, des sièges, des garnitures, des panneaux du plancher et du

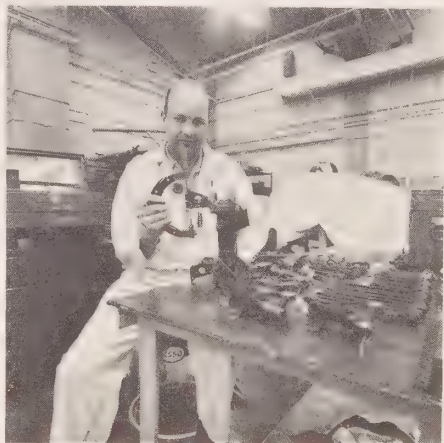
tableau de bord. Tous les systèmes et éléments sont vérifiés pour ce qui concerne l'usure, le bon état et la sécurité et tous les câblages électriques, conduites hydrauliques, conduites pneumatiques, systèmes à oxygène, systèmes d'extinction d'incendie sont inspectés et réparés ou remplacés lorsque c'est nécessaire.

Les réservoirs principaux sont ouverts, un examen sonique est effectué afin de détecter la corrosion due aux contraintes, les réservoirs à carburants étant partie intégrante de la structure de l'aile et l'on vérifie l'intérieur des réservoirs afin de détecter la prolifération de bactéries.

On procède aux essais de pressurisation et à la vérification de toute la peinture, de la structure et des garnitures, ainsi qu'aux réparations si nécessaire. Tout l'appareillage électronique aéronautique, tel que le pilote automatique Doppler, le compas, les systèmes de navigation et d'approche, le radar et le correcteur d'incidence sont enlevés, vérifiés au banc, et tous les éléments ayant atteint la date limite d'utilisation sont remplacés.

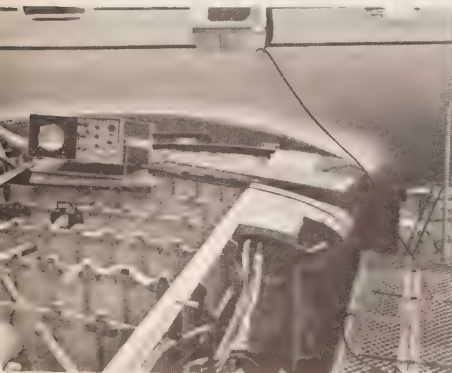
Un système de fichier récapitulatif de la marche de l'appareil permet de commander les pièces de remplacement antérieurement à la vérification effective, afin de les avoir sous la main au moment de la vérification.

Durant de nombreuses années cette opération complexe était confiée par contrat à des bases de réparation situées aux États-Unis. Toutefois, grâce à un vaste programme de formation «sur place» associé à des cours en usine en vue de l'obtention d'un noyau de techniciens d'entretien, ce travail est maintenant effectué par les Services de vol, ce qui a entraîné une réduction notable du coût ainsi qu'une économie sur le temps de non utilisation □



A. Bruhn, a line maintenance mechanic, checks the tolerance of the thrust reverser linkage.

M. A. Bruhn, mécanicien de piste, vérifie la tolérance à la timonerie de l'inverseur de poussée.



M. L. Shankles, technicien de Lockheed et M. D. Smith, mécanicien de piste, effectuent un examen ultrasonique des officiers de remplissage des réservoirs d'aile.



R. H. Ferrier, an avionics technician with the Avionics engineering section, checks out the voice recorder.

M. R. H. Ferrier, technicien à la section de l'électronique aéronautique vérifie le fonctionnement de l'enregistreur.



## UN MARIN RENSEIGNÉ EN VAUT DEUX

par Kenneth R. Reney  
Surintendant aux renseignements maritimes

«N.g.c.c. D'Iberville, ouest, les Escoumins à 23.40, heure prévue de passage Québec 09.30, pilote requis à Québec, destination Trois-Rivières.» Grâce au Centre des renseignements maritimes, ce message est immédiatement retransmis aux différents bureaux d'affectation des pilotes. Et voilà, notre marin est renseigné: il sait entre autres choses quand il devra être à son poste!

### Un peu d'histoire

Logé actuellement à l'édifice du Commerce, à Montréal, le Centre des renseignements maritimes a une longue histoire. Nous sommes en 1898: un service dit «Service des signaux» fait partie du ministère de la Marine et des Pêcheries. Cinquante-sept ans plus tard, ce service est rattaché à la Division du pilotage du ministère des Transports.

Visant avant tout à fournir les renseignements nécessaires à l'affectation des pilotes,

le service devient en 1957 le «Service de signalisation maritime». Durant cette période, le système de renseignements est très décentralisé si bien que les villes comme Québec, Trois-Rivières, Sorel et Montréal, ont leur propre centre de renseignements qui dessert une population locale en particulier.

Jusqu'en 1967, ce système de renseignements se composait de téléscripteurs et de plusieurs stations d'observation échelonnées le long du parcours entre les Escoumins et Montréal qui signalaient le passage d'un navire en l'observant visuellement.

En 1967, on décide d'intégrer le Service de la signalisation maritime à la nouvelle division du Contrôle de la circulation maritime que dirige le capitaine George G. Leask. Deux changements à noter: il se nommera dorénavant le «Centre des renseignements maritimes» et il relèvera des Services de l'hydraulique maritime du mi-

nistère des Transports.

### Buts et fonctionnement

Le but premier de la centralisation d'un système de renseignements était l'augmentation de l'efficacité et l'uniformité de la qualité des services à un coût moindre. C'est à partir de cette décision que s'amorce la disparition progressive des nombreuses stations d'observation vu l'établissement des lignes de communication directes avec les divers Centres de contrôle de la circulation maritime.

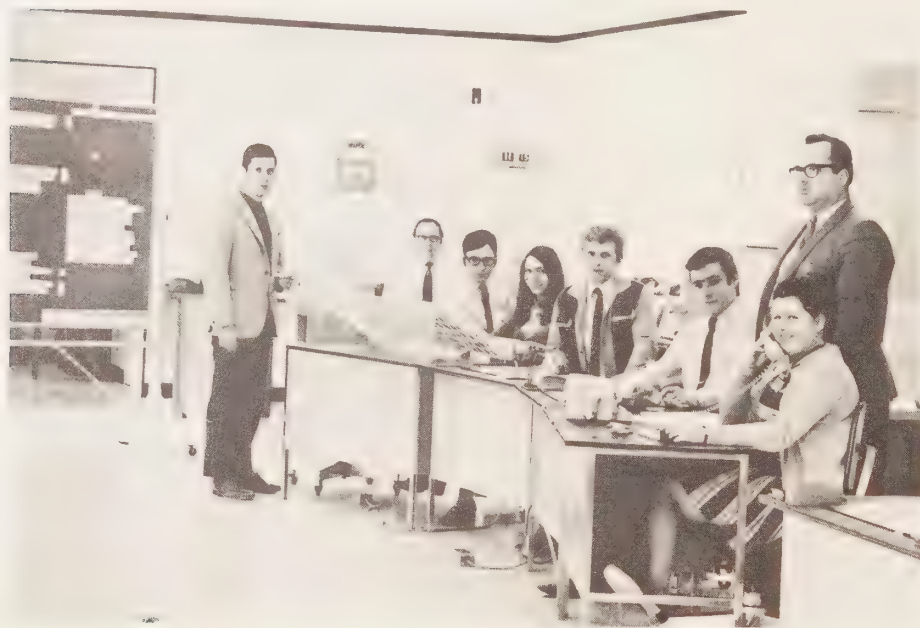
C'est ainsi qu'actuellement un réseau de téléscripteurs relie le Centre à différents endroits situés, entre Sept-Iles et South East Shoal (Lac Erié). Et grâce aux quatre principales sources d'information qui sont la Voie maritime du Saint-Laurent, *Marine Info Ontario*, les Centres de contrôle de la circulation maritime de Québec et de Montréal, l'information qui parvient par le téléscripteur nous révèle le nom du navire, l'heure de passage à un point donné, sa destination et l'heure d'arrivée prévue à l'endroit où le changement de pilote est requis. Et gare aux délais dans la retransmission de cette information aux bureaux d'affectation des pilotes car, un pilote averti tardivement pourra provoquer un retard dans le voyage du navire!

Par la suite, le renseignement est déposé sur le bureau du préposé aux écritures qui met l'information sur un carton pouvant être affiché sur un tableau magnétique. Finalement, l'information est placée dans un fichier afin de la conserver durant une période de 12 mois, opération mieux connue sur le nom de «système Kardex».

### Utilisation du travail accompli

Grâce au système Kardex que nous venons de mentionner, le Centre est en mesure de répondre à des demandes de renseignements qui remontent parfois à plusieurs mois en arrière, demandes souvent d'ordre juridique d'où la nécessité d'être efficace et précis.

Comme le Centre possède des tableaux magnétiques qui contiennent une foule d'informations et qui permettent en un coup d'œil rapide de déceler celles dont on



UNE ÉQUIPE DU CENTRE—Nous pouvons voir de gauche à droite: R. Farand, J. G. Harvey, R. Bourget, R. Isabelle, A. Bergeron, C. Cardinal, J. C. Frégeau et F. Daly

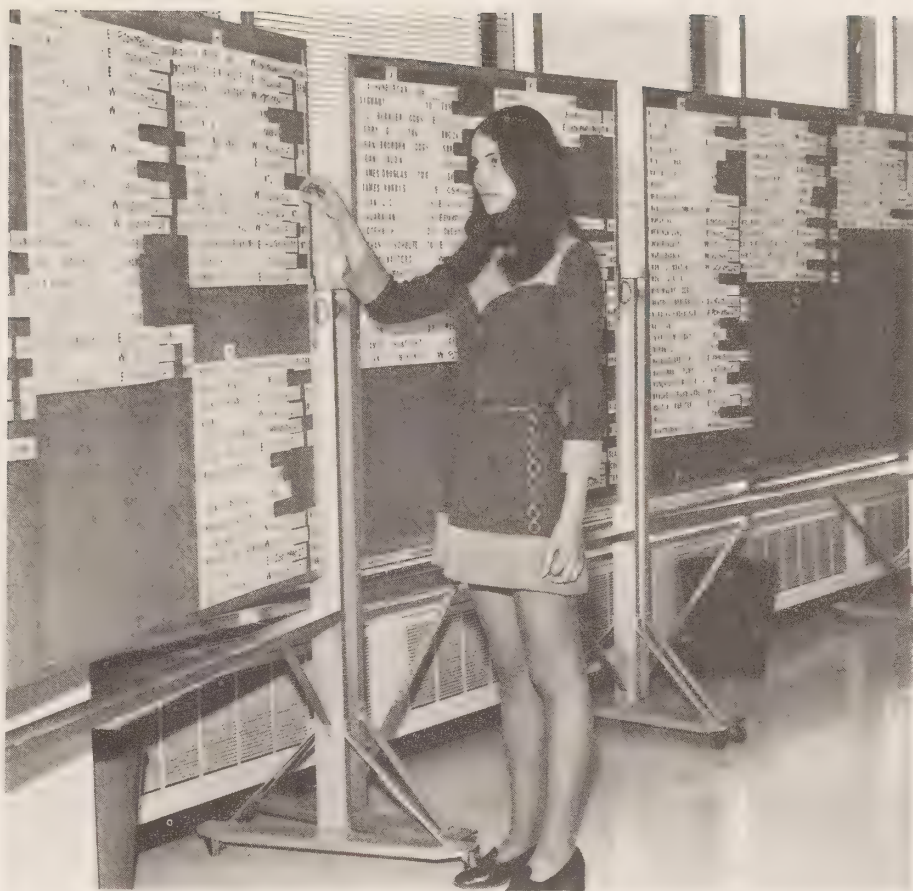
MARINE INFORMATION—Some employees of the centre, from left: R. Farand, J. G. Harvey, R. Bourget, R. Isabelle, A. Bergeron, C. Cardinal, J. C. Frégeau and F. Daly

a besoin, le Service de renseignements maritimes au téléphone qui constitue un aspect particulier de ce Centre s'avère une chose fort appréciée. Ainsi, un sondage a révélé que, pour le seul mois d'août 1969, le nombre des appels téléphoniques a été de 25,534 dont certains provenaient d'endroits aussi éloignés que Melbourne, Paris et Londres.

Comme cette centralisation visait à une plus grande efficacité du système, il fallait rendre évidemment l'information disponible aux différents centres maritimes tels que Québec, Trois-Rivières, Sorel, Toronto et Hamilton. Solution: on installe un service Zenith qui permet à ces endroits et leurs périphéries de communiquer gratuitement avec le Centre d'information de Montréal. Tout comme pour le bulletin publié quotidiennement et qui tire à 800 exemplaires, les principaux usagers de ce service sont les industries de soutien, les armateurs, les agences gouvernementales et le public en général.

En plus de retransmettre sur son réseau de télécriteurs les rapports météorologiques reçus de Dorval, le Centre des renseignements maritimes a le devoir de préparer sur une base horaire, un compte rendu de la situation présente des aides de la navigation, de la visibilité réduite ou de tout autre problème pouvant intéresser les navigateurs. Ce rapport horaire est distribué par télécriteur aux différents postes qui se situent entre Sept-Îles et Montréal. Durant la navigation d'hiver, le rapport fait sur l'état des glaces est transmis de la même façon en plus de messages enregistrés de trois minutes qui peuvent être entendus au téléphone. Echange de bons procédés: ces informations sont communiquées à Sydney (N.-É.) qui, en retour fera connaître leurs rapports sur l'état des glaces dans le golfe Saint-Laurent, rapports qui sont publiés dans le bulletin quotidien déjà mentionné.

Vraiment, ce Centre qui compte 29 personnes à son emploi se partageant le travail selon un horaire de rotation afin d'assurer un service continu à l'année longue, est le lien logique et rationnel de l'acheminement de l'information entre les différents centres de contrôle de la circulation maritime et les artisans de la marine □



DERNIÈRES NOUVELLES!—Mlle R. Isabelle s'apprête à afficher sur l'un des tableaux magnétiques les dernières informations reçues sur la marche d'un certain navire.

LATEST NEWS!—Miss R. Isabelle is placing on one of the magnetic boards the latest information received on an approaching ship

## Test extent of interference from aircraft

Instrument Landing System Guidance information, provided by a localizer which forms part of a standard instrument landing system, can be adversely affected by the proximity of taxiing or overflying aircraft because of reflections from their metallic surfaces. With the advent of larger aircraft this particular problem will become more severe, particularly at airports where runways are to be categorized, thus requiring the ILS to operate to tighter tolerances.

To discover the magnitude of interference that may be caused by aircraft taxiing along strips parallel to the active runway, and to find possible solutions to minimize this effect, a test series was run on Runway

36 at the Winnipeg International Airport. A simulated tail fin section of a large aircraft was made, consisting of two 48 foot self-supporting masts installed on a high bed trailer. A 30-foot square screen made from one inch poultry netting was raised to the top of the masts. This structure was then positioned at strategic locations adjacent to the runway, and a flight check of the localizer was carried out at each location.

Flight check recordings will be analyzed and placed in a computer to determine the final results. The results will be used to determine the taxiway orientation that will least affect the localizer facility □



# Le bénévolat, une pratique courante chez nos employés

Si vous croyez que les employés du ministère des Transports ne sont actifs qu'à leur travail, détrompez-vous! Un tour d'horizon rapide des activités des employés du Ministère après leurs heures de travail nous montre que plusieurs consacrent leurs temps libres au bénévolat. Voyons donc brièvement ce que certains, sans aucune rémunération, font pour leur communauté paroissiale ou urbaine.

## Montréal

Dans la métropole, l'administrateur régional suppléant de la division des aéroports et biens, M. Joseph-Emile Goulet, préside le Conseil d'administration de l'hôpital Notre-Dame de la Merci qui se spécialise dans le traitement des maladies chroniques, assume les fonctions de coordonnateur pour le congrès annuel du *Airport Operators Council International* et occupe les fonctions de directeur des relations publiques pour la campagne 1970 de la Fédération du grand Montréal, division de la Fonction publique.

Toujours à Montréal, cette fois dans les services de la construction, nous retrouvons plusieurs autres exemples d'âmes charita-

bles. Ainsi, M. Paul Veillette, ingénieur civil, fait partie du club *International Civitan* de North Shore, club social qui s'intéresse spécialement à l'enfance exceptionnelle. Pour sa part, M. Milville Mercier, également ingénieur civil, dirige les loisirs de St.-Joseph de Bordeaux et est membre de l'Association du Hockey mineur du Québec du district no. 3, ville de Montréal. Quant à M. Denis Latour, dessinateur industriel, il est membre de l'Association historique canadienne du chemin de fer, de la *B.C. Transit Society*, de l'*Upper Canada Railway Society*, et de plusieurs autres associations intéressées au transport en commun.

Autre exemple de Montréalais dévoués: M. J. A. McDonald, agent de planification régionale à la division des finances. Premier membre à vie et ancien président du *Kinsmen Club* de Notre-Dame, M. McDonald est également membre du comité exécutif du club *NDG Maple Leafs Junior Football*, secrétaire honoraire du Club de tennis Monkland et président au cours des deux dernières années du tournoi pour le championnat ouvert de tennis pour les jeunes du Québec.

## Québec

Le Ministère compte également des bons samaritains dans la Vieille Capitale. D'abord, il faut mentionner M. Winfield Forman, gérant régional de la division des télécommunications, qui se dévoue depuis plusieurs années dans les mouvements de scoutisme, agissant comme instructeur et examinateur et faisant partie de nombreux comités scouts. Mentionnons également M. Albert Lauzon, opérateur radio, qui est membre de l'Association du Hockey amateur du Canada et qui s'occupe des sports dans sa paroisse, se dévouant à l'entraînement des jeunes joueurs de 8 à 12 ans.

A cet endroit, M. Robert Bujold, surintendant de l'entretien des édifices, préside la Corporation d'un foyer pour personnes âgées en plus d'être membre de l'Association parents-maîtres. Pour sa part, M. J. A. S. Bernatchez, un chauffeur de camion, trouve le temps de diriger les destinées de Moisie, village de cette région □

## 20th anniversary

## Gander Air Traffic Control Centre has international reputation

On April 1, 1970, the Gander Air Traffic Control Centre celebrated its 20th anniversary.

It is interesting to note the changes that have taken place since this centre first opened. For instance, when the centre opened, the staff consisted of one chief controller, 8 controllers and 4 assistants. Now the staff is one chief, one centre operations supervisor, 11 shift supervisors, 85 controllers and 33 assistants.

Compared with its early days of the DC4 and Constellations, which made approximately 50 civil crossings per day over the North Atlantic, today there are approxi-

mately 500 civil jets transiting this same area and these range in size from the small executive jet to the huge Boeing 747. Traffic Control in the unit now also enjoys computer assistance in handling this volume of traffic.

The Gander Air Traffic Control Centre has, over the years, built up an international reputation for service to the flying public for which the Ministry can be justly proud.

## Air pollution meteorology

(Continued from page 10)

The earliest studies of air pollution meteorology in Canada were in British Columbia at Trail in the 1930's. It is of considerable interest to note that the newest addition to the expanding air pollution meteorology tower network will be in Vancouver, B.C.

During the current year, Meteorological Branch Headquarters and the Pacific Regional Office will cooperate in the erection of a 300-foot tower on a site to be selected in the greater Vancouver area. Air pollution studies are currently topical in all regions of Canada, and the last major urban gap in the Canadian network of meteorological towers will be filled when the construction and instrumentation at Vancouver are completed this year.

Although data collected in the tower network are of major importance to air pollution studies, other important applications exist. Without accurate wind velocity data from tall structures, the engineering and architectural professions would be at a loss to establish valid wind load design criteria. Similarly, meteorologists use the data in their studies of urban climate □

# What good are northern airstrips?

by Gordon Lamb  
Yellowknife Meteorological staff.

Why spend thousands and thousands of the tax-payers' dollars on remote airstrips away up in the Arctic? What good do they do? Who is going to use them but a few Arctic owls who do quite nicely without them? These are questions Southern Canadians commonly ask when Northerners plead for more and better air facilities in the North.

Well, it seems safe to say that the new airstrip constructed by the Ministry of Transport at Coppermine, N.W.T. saved a human life just six weeks after being put into use. This is the opinion of neutral observers as well as the man whose life was on the line.

On October 27, 1969 veteran Northerner "Red" Pederson was flown to Yellowknife for an emergency appendix operation. Without that airstrip the flight might well have been impossible. Without it Mr. Pederson might not be alive today.

## In old days

At this time of year all the lakes and water surfaces along the Arctic coast are covered with a thin layer of ice that prevents the use of floatplanes and will not support the weight of a skiplane. In the old days, that is before 1969, freeze-up meant laying up an adequate supply of necessities and resigning oneself to going without mail for a month or more. Health-wise it meant that one simply hoped—hoped that no serious accidents or illnesses occurred until the ice was thick enough to land a plane on, and hoped that Lady Luck would keep smiling.

For "Red" Pederson Lady Luck had stopped smiling. She first started to frown on Friday, October 24, when he felt some minor stomach cramps. For a day or two nothing more happened. Then on Sunday, October 26, the first severe pains struck. The nurses at the Coppermine Nursing Station confirmed that Red's affliction was appendicitis and it soon became apparent that fast action was needed to save his life.

Prior to 1969 this would have been the point where the panic button was pushed. All available resources would go into a search for a method of getting the patient out to hospital. This might involve: (1) finding or breaking a patch of open water big enough to land a floatplane; (2) searching out a protected bay or inland lake

where the ice was thick enough to land a skiplane; (3) examining the sandbars along the mouth of the river to see if there was a spot long enough and flat enough to land a plane on wheels. Any of these methods would involve a rough, treacherous trip by sleigh and/or boat to the selected site—that is, if the unfortunate patient was still alive when a suitable site was found.

Fortunately for Mr. Pederson this was 1969. Two thousand feet of strip were available for an aircraft to land on and take him to safety. The call went out to Yellowknife for help. Before midnight Doug Veitch of Northwest Territorial Airways was on his way with a nurse on board his light twin-engined aircraft.

(Continued on page 24)



**NEW GREAT LAKES ICEBREAKER CHRISTENED**—A new icebreaking supply and buoy vessel, the CCGS *Griffon*, was welcomed to the Canadian Coast Guard fleet on February 27, when Mrs. Donald S. Macdonald (inset), wife of the President of the Privy Council, christened the vessel at the Davie Shipyard in Lauzon, Quebec. The *Griffon* will normally operate in the lower Great Lakes from her Prescott, Ontario, base. She is named after the first sailing ship on the Great Lakes, which was constructed under the direction of the explorer, La Salle.

(Photo by Edwards, Quebec)

**BAPTÊME D'UN NOUVEAU BRISE-GLACE**—Depuis le 27 février, la Garde côtière canadienne compte un nouveau baliseur brise-glace, le *n.g.c. Griffon*. Baptisé par l'épouse du président du Conseil privé, Mme Donald S. Macdonald (voir médaillon), au chantier de la compagnie Davie (Lauzon, Qué.), il patrouillera la région aval des Grands lacs de sa base située à Prescott (Ont.). Il porte le nom du premier navire à voile à s'aventurer dans les Grands lacs et qui avait été construit sous la direction de l'explorateur La Salle.



# Graduation Ceremony at Canadian Coast Guard College

A former senior official of the Department of Transport who made a significant contribution to the Coast Guard Service in Canada has been made an Honorary Commodore of the Coast Guard fleet. The presentation took place during the second graduation ceremony of the Coast Guard College, Sydney, N.S., on May 30.

The new Honorary Commodore is Gordon W. Stead, Privy Council Office, who was with the Department for 12 years and as Assistant Deputy Minister, Marine was one of those responsible for the establishment of the Coast Guard College and development of a career service.

The conferring of this rank is a rare Ministry honour and is a unique recognition of persons who have made significant contributions to the Coast Guard.

The 22 Officer Cadets who graduated at the ceremony enrolled at the College four years ago and brought to 41 the total of fully-fledged officers turned out by the College since it was officially opened in September, 1965.

Also attending the ceremony was Dr. Pierre Camu, Administrator of the Marine Transportation Administration, who presented the diplomas to the graduates, and other senior officials of the Ministry.

The named trophies were presented by the donors, with the exception of the new Purney Trophy, and all the other awards were handed over by Mr. Stead, who was the guest of honour.

The Purney Trophy, in memory of Cadet

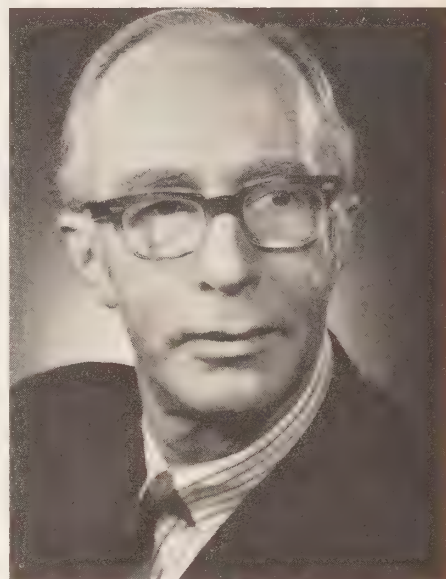
Mark Curtis Purney, lost in a drowning accident last year, was handed over to the winner, Cadet Denis Vaillancourt, for first year Cadet seamanship, by Chief Cadet P. Boisvert at the request of Mr. and Mrs. Purney.

It was the first graduation ceremony for the new Director of the College, Captain J. Y. Clark, who was appointed to that position in January. He succeeded Captain J. Gerard Brie, who also attended the ceremony.

The graduating class consisted of 11 navigation officers and 11 marine engineers. Special awards presented to the graduates: Seamanship—Cadet Gregory A. Nickerson, Halifax; Engineering Drawing—Cadet Eric Bent, Summerside, P.E.I.; Academic Achievement—Cadet Captain Frank Wright, Langley, B.C.; Bilingualism—Chief Cadet Captain Pierre Boisvert, Candiac, P.Q.; Marine Engineering—Cadet David Gaede, Calgary; Nautical Sciences—Cadet Charles Gadula, St. Catharines; Centennial Gold Medal for best all-round Cadet in graduating class—Chief Cadet Captain Pierre Boisvert.

## Trophy winners

Brand Trophy, Cadet Capt. Rene Turenne; Stead Trophy, Cadet Denis Vaillancourt; Purney Trophy, Cadet Denis Vaillancourt; Maritime Regional Trophy, Cadet Andrew Tait; Navy League Trophy, Cadet John Aitchison.



Gordon W. Stead.

Graduates from *Ontario* were Brian G. Adam, Brockville; John A. Falardeau, Manotick; Charles J. Gadula, St. Catharines; Fred S. Perkins, Don Mills; Ernst A. Radloff, Chatham; A. Murray Smith, Collingwood; John E. Walasek, Barrie. *Quebec*: Paul Beauchemin, Montreal; Victor H. Bennett, Sherbrooke; Pierre Boisvert, Candiac; Serge Theoret, Montreal; *British Columbia*: Michael D. Moody, Vancouver; D. Frank Wright, Langley. *Manitoba*: John B. Aitchison, Winnipeg; Rene N. Turenne, St. Boniface. *Alberta*: David T. Gaede, Calgary. *Nova Scotia*: Malcolm J. MacLauchlan, Dartmouth; William A. MacQuarrie, New Glasgow; K. David Marsh, Reserve, C.B.; Gregory A. Nickerson, Halifax; Roderick N. Stright, Lower Sackville. *P.E.I.*: Eric D. Bent, Summerside.

The valedictory address was given by Cadet John Aitchison, and following the ceremony a reception was held for specially invited guests, parents of graduates and the graduates.



A PROUD DAY—March past of the graduating Cadets at this year's graduation ceremony at the Coast Guard College

LE GRAND JOUR—Défilé des cadets diplômés lors de la cérémonie de remise des diplômes au Collège de la Garde côtière

# Collation des grades au Collège de la Garde côtière canadienne

Un ancien fonctionnaire supérieur du ministère des Transports, qui a fourni un apport important au service de la Garde côtière canadienne, a reçu le grade de commodore honoraire de la flotte de la Garde côtière. Cet honneur lui a été conféré au cours de la seconde cérémonie de remise des diplômes au Collège de la Garde côtière canadienne à Sydney (N.-É.), le 30 mai.

Le nouveau commodore honoraire est M. Gordon W. Stead, du bureau du Conseil privé, qui a passé 12 ans au service du ministère et qui, en qualité de sous-ministre adjoint pour la marine, fut l'une des personnes chargées de l'établissement du Collège de la Garde côtière et de l'élaboration d'un plan de carrière.

La remise de ce grade est un honneur rare et c'est une façon unique pour le Ministère de reconnaître les services des personnes qui ont fourni un apport important à la Garde côtière.

En recevant leurs diplômes aujourd'hui, les 22 élèves-officiers qui se sont inscrits au Collège il y a quatre ans, portent à 41 le nombre d'officiers qualifiés qui ont été formés par le Collège depuis son inauguration officielle, en septembre 1965.

Assistaient également à la cérémonie, M. Pierre Camu, dirigeant de l'Administration canadienne des transports maritimes, qui a présenté les diplômes aux finissants, ainsi que d'autres fonctionnaires supérieurs du Ministère.

Les trophées qui portent un nom ont été présentés par leurs donateurs, sauf le nouveau trophée Purney; toutes les autres distinctions ont été présentées par M. Stead, l'invité d'honneur.

À la requête de M. et Mme Purney, le



UN BRIN DE CAUSETTE—À l'issue de la cérémonie, les invités causent. Voici de gauche à droite M. Gordon W. Stead, à qui on a conféré le grade de Commodore honoraire de la flotte de la Garde côtière, M. Pierre Camu, administrateur des transports maritimes du Canada, le capitaine J. Y. Clarke, directeur du Collège, le capitaine E. S. Brand, donateur du trophée *Brand* et le capitaine J. Gérard Brie, ancien directeur du Collège

(Photos par Bob Bachynsky)

TALKING IT OVER—Having a discussion following the ceremony are, from left: Gordon W. Stead, who was made an Honorary Commodore of the Coast Guard fleet, Dr. Pierre Camu, Administrator of the Marine Transportation Administration, Captain J. Y. Clarke, Director of the College, Captain E. S. Brand, donor of the Brand Trophy, and Captain J. Gerard Brie, former Director of the College

(Photos by Bob Bachynsky)

trophée Purney, destiné à conserver le souvenir du cadet Mark Curtis Purney, qui s'est noyé l'an dernier, a été remis au gagnant, le cadet Denis Vaillancourt, vainqueur du concours de matelotage des cadets de première année, par le cadet en chef P. Boisvert.

C'était la première remise des diplômes pour le nouveau directeur du Collège, le capitaine J. Y. Clark, nommé à ce poste en janvier dernier. Il a succédé au capitaine J.-Gérard Brie, qui a aussi assisté à la cérémonie.

La classe des finissants comprenait 11 officiers de navigation et 11 officiers mécaniciens de marine. Des prix spéciaux ont été présentés aux élèves suivants: Matelotage—le cadet Gregory A. Nickerson, d'Halifax; dessin technique—le cadet Eric Bent, de Summerside (I.P.-E.); réussite générale—le cadet-capitaine Frank Wright, de Langley (C.-B.); bilinguisme—le cadet-capitaine en chef Pierre Boisvert, de Candiac

(Qué.); mécanique navale—le cadet David Gaede, de Calgary; sciences nautiques—le cadet Charles Gadula, de St. Catharines; la médaille d'or du Centenaire, décernée au meilleur cadet, à tous points de vue, de la classe des finissants—capitaine-cadet en chef Pierre Boisvert.

## Gagnants des trophées

Le trophée Brand—le cadet-capitaine René Turenne. Le trophée Stead—le cadet Denis Vaillancourt. Le trophée Purney—le cadet Denis Vaillancourt. Le trophée de la région maritime—le cadet Andrew Tait. Le trophée de la Navy League—le cadet John Aitchison.

Les finissants venant de l'Ontario étaient les suivants: Brian G. Adam, de Brockville; John A. Falardeau, de Manotick; Charles J. Gadula, de St. Catharines; Fred S. Perkins, de Don Mills; Ernest A. Radloff, de Chatham; A. Murray Smith, de Collingwood; John E. Walasek, de Barrie. *Du Québec*: Paul Beauchemin, de Montreal; Victor H. Bennett, de Sherbrooke; Pierre Boisvert, de Candiac; Serge Théoret, de Montréal. *De la Colombie-Britannique*: Michael D. Moody, de Vancouver; D. Frank Wright, de Langley. *Du Manitoba*: John B. Aitchison, de Winnipeg; René-N. Turenne, de Saint-Boniface. *De l'Alberta*: David T. Gaede, de Calgary. *De la Nouvelle-Écosse*: Malcolm J. MacLauchlan, de Dartmouth; William A. MacQuarrie, de New Glasgow; K. David Marsh, de Reservoir; Gregory A. Nickerson, d'Halifax; Roderick N. Stright, de Lower Sackville. *De l'Île du Prince-Édouard*: Eric D. Bent, de Summerside.

Le discours d'adieu a été prononcé par le cadet John Aitchison et, après la cérémonie, une réception a eu lieu pour les invités spéciaux, les parents des diplômés et les diplômés eux-mêmes.



LE TROPHÉE DE LA NAVY LEAGUE—M. Gerald Beaton, de la *Navy League*, remet le trophée présenté par son organisation à John Aitchison, de Winnipeg, qui a prononcé, au nom de ses camarades, le discours d'adieu pendant que Mme Aitchison surveille la scène. Le trophée est décerné pour bonne présentation, courtoisie et tenue

NAVY LEAGUE TROPHY—Gerald Beaton of the Navy League presents the Navy League Trophy to Valedictorian John Aitchison, Winnipeg. Looking on is Mrs. Aitchison. The trophy was for appearance, courtesy and deportment



## Making vital contribution in their own communities

After making inquiries in regions and districts throughout Canada "Transport" finds that more Ministry of Transport personnel than we had thought are involved in community activities in their respective areas. In the January-February issue of "Transport" we published the names of a great many of these people but, unfortunately, time and space did not allow us to complete our investigations and do the subject justice.

From Edmonton, the Regional Director of Air Services, G. E. McDowell, has since sent us a most impressive list of personnel in the Western Region who are actively engaged in community work. This list covers a wide range of activities and is another example of the vast amount of volunteer work Ministry personnel are doing.

D. J. Dewar, Regional Controller Telecommunications and Electronics, Edmonton, is president of the Federal Institute of Management, while D. Berwick, Electronics Technician is president of the Northern Alberta Radio Club. S. C. Bateman, Regional Financial Officer, is vice-president of the same radio club, and is also on the Administrative Committee of the Edmonton Amalgamated Credit and Savings Union.

N. A. Murray, Regional Classification Officer, is president and past president of St. Albert Junior Chamber of Commerce, president and past president of St. Albert District Square Dance Association, and youth counsellor and licensed layreader of St. Matthew's Anglican Church.

F. Coustal, Technical Officer (Planning) is Federal Service Division Chairman of the United Community Fund of Greater Edmonton, and K. Mead, Regional Airworthiness Inspector, is a member of the Aircraft Maintenance Curriculum Committee of Edmonton Public School Board.

Other Ministry personnel in Edmonton who are engaged in community work are:

F. E. Burbidge—Treasurer, West Edmonton Y's Men; member Edmonton Social Planning Committee and member of World Outlook Committee.

H. F. Norris—Buildings Director, McQueen Community League.

A. Paulsen—National Cross Country coach and head coach of the Alberta Junior Ski Team.

J. H. Freeman—Credit Union Executive of the Edmonton Amalgamated (Civil Service) Savings and Credit Union.

D. B. Fraser—School Trustee of St. Albert School District.

L. W. Johnson—President of Parkallen Community League.

F. Maybroda—Coach of Jasper Place Hockey Team.

R. G. Stark—Chairman of the Administrative Committee of the Edmonton North Presbytery.

Eric J. Harbinson—Third vice-president of the Edmonton (Westmount) Lions Club and President of the Alberta Work Study Association.

In *Hay River* M. Kostynuk is a figure skating instructor; C. Murray is a high school basketball coach; A. Dion is a high school volleyball and basketball instructor, and W. Zuccato is leader of the Ventures Boys' Club and is involved in electronic

training leading to operation of an amateur radio station.

In *Fort Resolution* J. L. Villeneuve is chief of the Fort Resolution Indian Band and a member of the Fort Resolution Council with chair to Parks and Recreation Committee. J. T. R. Ainsley is chairman of the Fort Resolution Council, Centennial Committee, Catering Committee and the Civil Disaster Committee.

At *Pincher Creek* R. W. Turner is past Secretary-Treasurer of the Royal Canadian Legion, and A. G. Laatsch, officer in charge of the Pincher Creek Surface Weather Station, is president of the local curling club, a Director of the Minor Baseball Association and a minor hockey referee ☐

### FIRE PREVENTION—D. A. McINTYRE TROPHY



The D. A. McIntyre Trophy for the regional establishment rating highest in fire prevention and safety measures and procedures was won this year by Moosonee, Ontario, Upper Air Station. The trophy, which was given to the Region for annual competition by the late D. A. McIntyre, Superintendent of Airports, was presented to D. J. Eitzen, Officer-in-Charge, Moosonee Upper Air Station on February 24 by D. P. Glen, Regional Director Air Services, Ontario Region. A framed certificate for permanent retention was presented at the same time. From left: B. M. Reid, D. J. Eitzen, J. P. Lacroix, Moosonee; G. L. Pincock, Regional Meteorologist; D. J. Law, J. R. Metcalfe, Moosonee; D. P. Glen, Regional Director.

La station d'observation en altitude de Moosonee (Ont.) a gagné cette année le trophée D. A. McIntyre remis à l'établissement régional qui a mérité les plus hautes notes pour ce qui est de la prévention des incendies et des mesures et méthodes de sécurité. Ce trophée qui a été donné à la région, aux fins d'un concours annuel, par le regretté D. A. McIntyre, ex-surintendant des aéroports, a été présenté, le 24 février, au responsable de la station d'observation en altitude de Moosonee, M. D. J. Eitzen, par le Directeur régional des Services de l'Air pour l'Ontario, M. D.P. Glen. M. Eitzen a reçu à la même occasion un certificat encadré. De gauche à droite: MM. B. M. Reid, D. J. Eitzen, J.-P. Lacroix, de Moosonee; G. L. Pincock, météorologiste régional; D. J. Law et J. R. Metcalfe, de Moosonee; et M. D. P. Glen, directeur régional.

# Everything from a "needle to an anchor" handled in Ministry's resupply operations

It was anticipated that by the close of navigation this year, close to 100,000 tons of cargo would be handled in the Ministry's northern resupply operations. The Marine Operations Branch of the Ministry of Transport is the organization responsible for the resupply of the Eastern Canadian Arctic on behalf of other government departments and also for the United States Air Force in the resupply of military installations.

In addition to delivery of general supplies, the Ministry is supporting a variety of activities in Canada's north in the 1970 season. Supplies consist of oil in bulk and, to use a nautical expression, everything from a "needle to an anchor".

Some 45 ports of call are made during the season. Commercial tankers and dry cargo vessels are chartered and supported by our Coast Guard icebreakers and northern supply vessels. Powered and dumb barges are employed in the transfer of cargo from ship to shore, and stevedores are engaged to unload barges and deliver cargo to the site.

In 1969 a new concept of ship to shore delivery was carried out on a trial basis. This was with the use of the Sikorsky Sky-crane type of helicopter. A further trial to evaluate this method of delivery is being conducted this summer at four sites in the Arctic. A specialized vessel is being chartered for the loading of containers and unitized cargo.

The four sites being serviced in this manner are Resolute Bay, Arctic Bay, Pond Inlet, and Clyde River. Several advantages will be gained by this means of delivery. The use of containers will minimize the handling and damage factor. It also will result in less charter time on vessels. Ultimately the Sky-crane type of operation will be utilized at all sites in the Arctic.

In addition to cargo operations, the Ministry provides support of scientific work such as oceanographic and hydrographic projects for the Department of Energy, Mines and Resources. Icebreakers also escort grain shipping on the Hudson Bay route to Churchill. Installation of navigational aids on the route are placed by icebreakers.

Due to the increased activity in the oil exploration field several commercial tankers and dry cargo vessels will be escorted to such places as Lougheed Island, Vanier Island and to Eureka.

It is going to be a busy year for the Coast Guard fleet, and with the expertise of the Masters and men it will undoubtedly prove to be a successful season □

### Lennard Island tower

The 55-foot fiberglass tower at Lennard Island in the Victoria District has now been in operation for one and a half years. This structure is surmounted by a 36-inch beacon, the loom of which is visible from Barclay Sound, a distance of approximately 24 miles.

Art Britton, lightkeeper, has observed the tower resisting many severe storms since its installation and finds that the structure is more secure than one felt it would be at first sight.

Mr. Britton has every confidence in the ability of this type of tower to withstand the forces of the elements □



**HELICOPTER ASSISTANCE**—Unloading supplies from the chartered vessel *J. E. Simard* at Resolute Bay. Also in the picture are *CCGS John A. Macdonald* and *CCGS C. D. Howe*. INSET—A 35-ton tractor is unloaded from a barge at Pangnirtung.



# Scholarship Plan continues for eighth consecutive year

The Ministry of Transport continues for the eighth consecutive year its Scholarship Plan, offering up to seven \$500 scholarships. These scholarships may be used in the first year at any Canadian university or affiliated college which is a member of the Association of Universities and Colleges of Canada.

Applications have increased each year since the program began in 1962. It is expected that interest in the program will increase even more this year.

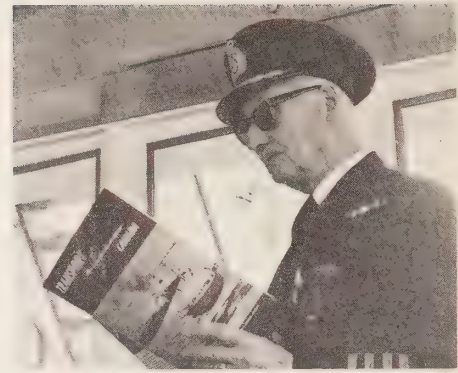
Scholarship winners may enroll in any university course which leads to a baccalaureate degree. Over the years young men and women in each of the provinces, representing each of the service areas of the Ministry, have taken part in the program.

The Scholarship Plan was introduced to encourage and financially assist children of

serving, retired or deceased employees to obtain a university education. It is financed by the annual revenue derived from the investment of surplus insurance funds.

Eligible students include the natural, step or legally-adopted children of employees. They also include any other children who are solely dependent on the employee for support and maintenance and are permanently residing in the employee's household in a regular parent-child relationship.

Application forms may be obtained from L. G. Cope, secretary of the Scholarship Plan, Training and Development Division, Ministry of Transport, Hunter Building, Ottawa 4, Ontario, or from any regional or district office of the Ministry. Requests for further information on the Scholarship Plan should be addressed to Mr. Cope □



«TRÈS INTÉRESSANT»—C'est le commentaire que nous a fait le capitaine Alfred Ouellet alors qu'il feuilletait le numéro de janvier-février de la revue «Transport» dans la timonerie du *d'Iberville*, navire qu'il commandait dans les glaces du Saint-Laurent au cours de l'hiver dernier. Ce numéro, fort bien illustré, renfermait un excellent reportage sur l'accueil réservé au *John A. Macdonald* et son capitaine, Paul Fournier, au retour de leur voyage historique dans l'Arctique avec le *Manhattan*.

SO WHAT'S NEW?—This was Captain Alfred Ouellet's comment as he read through the January-February 1970 issue of "Transport"—Canada in the wheelhouse of his ship, C.C.G.S. *d'Iberville*. The photo was taken as the crew was getting ready to lead the ship into an ice jam shaping up at the Quebec bridge. This well-illustrated edition of the magazine contained an excellent report on the welcome given the *John A. Macdonald* on completion of its historic voyage in the Arctic last year with the *Manhattan*.

(Photo by Ray Stone)

## Le régime des bourses d'études entre dans sa huitième année

Le ministère des Transports continue d'appliquer un régime de bourses d'étude qui entre dans sa huitième année d'existence et offre jusqu'à sept bourses de \$500. Ces bourses sont valables pour la première année d'étude dans une université canadienne ou un collège affilié qui sont membres de l'Association des universités et collèges du Canada.

Depuis l'entrée en vigueur du programme, en 1962, le nombre des demandes a augmenté régulièrement chaque année, et l'on prévoit un plus grand intérêt encore cette année.

Les bénéficiaires de ces bourses pourront s'inscrire à tout cours universitaire conduisant à un baccalauréat. Au cours des années précédentes, des jeunes gens et des jeunes filles de toutes les provinces et représentant tous les services du Ministère ont bénéficié de ce programme.

Le Régime des bourses d'étude a été établi dans le but d'encourager et d'aider financièrement les enfants des employés en

service, retraités ou décédés, à acquérir une formation universitaire. Les intérêts annuels proviennent de l'investissement des excédents du Fonds d'assurance du Ministère.

Les enfants admissibles d'un employé comprennent également les enfants naturels, les beaux-fils ou belles-filles et les enfants légalement adoptés, ainsi que tout autre enfant qui est entièrement à la charge de l'employé et qui demeure en permanence chez celui-ci où il est considéré comme un enfant de la maison.

On pourra se procurer des formules de demande en s'adressant à M. L. G. Cope, secrétaire du Régime de bourses d'études du ministère des Transports, Division de la formation et du perfectionnement, Ministère des Transports, Edifice Hunter, Ottawa 4 (Ont.) ou à tout bureau régional ou de district du ministère des Transports. On peut aussi s'adresser à M. Cope pour obtenir de plus amples renseignements au sujet du Régime des bourses d'étude □

### Northern Airstrips

(continued from page 19)

This should have been the end of the story. However, it seemed that Nature was determined to drive home the need for all-weather airstrips capable of handling larger aircraft. Doug's rescue attempt was thwarted 100 miles from his goal when he encountered such severe icing that there was no choice but return to Yellowknife and send a larger aircraft equipped with suitable de-icing equipment.

By now the operation was becoming a race to cheat death. Appendicitis waits for no man—or his airplane either.

For the next try Doug teamed up with Harry Sorenson with a DC-3. In the early morning hours of Monday, October 27, the roar of Harry's engines brought a sigh of relief from the worried people in Coppermine. No time was wasted in getting the precious human cargo on board. Less than 24 hours after his condition was diagnosed Mr. Pederson was in Yellowknife Hospital with the infected organ removed.

In discussing the experience afterwards, Mr. Pederson agreed that he almost certainly owed his life to the new airstrip. The doctor advised him the appendix actually burst right on the operation table immediately after removal. Certainly, even one more day would have been too late □

# Suggestions cover many areas of work in Ministry

Suggestions which will contribute to improved working operations, safety procedures and savings in the Ministry are being submitted by personnel all over Canada. These suggestions affect many fields of endeavour and awards have ranged from \$10 to \$300.

The suggestions being submitted by personnel are examined and assessed by the appropriate officers and are playing an important part in the continuing improvement program of public service in the Ministry.

The Co-ordinator for the Suggestion Award Program reports that 411 suggestions were received in 1969, an increase of 25 per cent over 1968. In 1969, 110 awards to employees were made, for a cash total of \$6,000. The suggestions made under the plan in 1969 resulted in savings to the taxpayer of \$53,000.

Edgar C. Cronkhite, Weston, Ont.—\$300 award—Resurfacing of worn-out pump bearing brackets.

Donald G. Roberts, Vancouver—\$200 award—Modification of aircraft nose wheel to avoid shimmy and aid pilot control on landings.

Norman S. Derworiz, Winnipeg—\$200 award—Modification to existing ventilating system of PAR CRC/FPN-100 Runway Building Video Bay and Power Supply Bay.

Erland N.C. Tilander, Bramalea, Ont.—\$75 award—Change in maintenance procedure in GRN-501 Tacan equipment.

Peter A. Neville, Maniwaki, Que.—\$15 award—Inscription of hairline on transparent plastic straight-edges for upper air observations.

Russel E. Jackson, Ottawa—\$20 award—Alignment of runway and touch down lighting.

Edward J. Harvey, Ottawa—\$75 award—Insulated sleeve over metal case of capacitor to avoid electrical shock hazards.

Howard D. Smith, Melville, Sask.—\$10 award—Flying Canadian flag at Melville Monitoring Station.



**AVOIDING SHIMMY**—Donald G. Roberts of Vancouver, centre, gets his \$200 suggestion award from W. M. Johnson, Regional Controller, Civil Aviation. Mr. Roberts' suggestion involved modification to aircraft wheels to avoid shimmy when landing. Looking on is W. R. Lavery, Regional Superintendent, Air Regulations.

**DISPOSITIF ANTI-SHIMMY**—M. Donald G. Roberts, de Vancouver, (au centre) reçoit du Régisseur régional de l'aviation civile, M. W. M. Johnson, une prime à l'initiative de \$200. Le projet de M. Roberts est une modification aux roues d'aréonef pour éviter le shimmy à l'atterrissage. Le Surintendant régional des règlements de l'Air, M. W. R. Lavery, observe la remise de la prime.

Gordon F. Tremble, Winnipeg—\$30 award—Painting of cloud height measuring alidade flat black to avoid background glare.

George M. Martin, Rockland, Ont.—\$25 award—Inclusion of amendment list in Ottawa Government Telephone Directory.

James Wayne Burnside, Kenora, Ont.—\$15 award—Red Lake weather broadcast by Kenora.

Mrs. Ann R. Bradshaw, Sherwood Park, Alta.—\$20 award—Quick reference file for teletype procedures and teletype distribution.

William C. L. Spence, Port Hardy, B.C.—\$20 award—Numbering of runway lights both on lamp standards and all blueprints.

Allan James Hunt, Ucluelet, B.C.—\$40 award—Instruction of all Ministry personnel at Tofino Airport in setting of emergency lighting facilities on runways.

Bruce B. Waine, Ucluelet, B.C.—\$40 award—Improvement to marine operator's service during distress and times of heavy workload.

William H. Fernuik, Saskatoon—\$50 award—Modification of RCA Localizer RF Transfer and Monitor Chassis.

Ralph E. Noden, Alvin E. Raaflaub and Leon D. Bordenave, all of Saskatoon—\$25 award each—Conversion of wooden core tractor mounted or towed sweepers to accept worn runway sweeper broom sections.

Wayne F. Merk, Alert Bay, B.C.—\$40 award—Change in announcement times of Radio Traffic List to avoid interference in transmission.

Norman S. Greig, North Vancouver—\$75 award—Method for discovering disconnected receiving antennae.

Lloyd A. Golts, Grande Prairie, Alta.—\$25 award—Conversion of wooden core fibre bristle road sweeper to Danline steel bristles.

Richard C. Saunders, Richmond, B.C.—\$40 award—Decommissioning of frequency of 321.3 MHz at Vancouver Marine/Radio Station and using it to greater advantage at the Vancouver Tower. □





**Captain H. D. Mackay**

Between 40 and 50 guests, representing a wide variety of marine interests throughout the Maritimes gathered to bid farewell to Captain Herman D. Mackay, who was retiring from his position as Regional Superintendent of Nautical Services for the Maritimes.

At a ceremony held in Halifax, N.S., various presentations were made to Captain and Mrs. Mackay, and tributes paid to the fairness and encouragement he had given to the staff and students of the Halifax Marine Navigation School throughout his 22 years as the Examiner of Master and Mates □

## Other retirements

Gilbert DesRoches, Saint John, N.B., February 26—22 years;

Miss Alice R. Garey, Saint John, N.B., February 1—37 years;

Herbert A. Garland, Nashwaaksis, N.B., February 20—32 years;

Thomas J. Gosse, St. John's East, Nfld., January 4—27 years;

Emile Gourgues, Quartermaster, CCGS *d'Iberville*, February 11.

H. E. Greer, Parry Sound, Ont., January 13—16 years;

John Hardman, Moncton, N.B., March 21—23 years;

Wilbert C. Hopkins, Moncton, N.B., February 16—41 years;

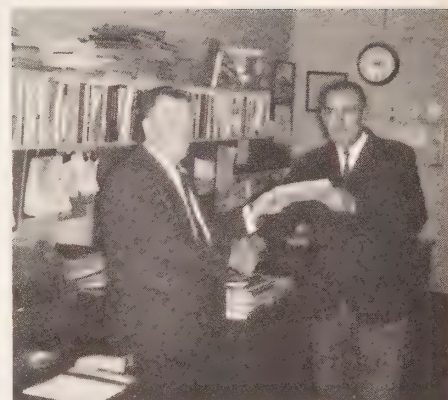
J. E. Jacques, Ottawa, January 31—37 years;

James E. Kelsey, Yarmouth, N.S., January 28—14 years;

O. R. Labelle, Chambly, P. Q., January 24—22 years;

G. H. Lapensee, Quebec, December 10, 1969—38 years;

Donald Macaulay, Victoria, December 16, 1969—19 years;



**BID FAREWELL**—Archibald A. (Archie) Stanford retired at Gander, Nfld. after 23 years' service. He had been employed in the Field Maintenance Section of Gander International Airport as heavy equipment operator. Friends and co-workers said farewell and presented gifts to Mr. Stanford at a gathering in his honour at Hangar 13. Here J. Noel, Supervisor, right, presents a gift to Mr. Stanford.

**NOS BONS VOEUX L'ACCOMPAGNENT**—Après 23 ans de service au sein du Ministère, M. Archibald A. (Archie) Stanford a pris sa retraite. Il a occupé les fonctions de Conducteur de matériel lourd à la Section de l'entretien des terrains de l'Aéroport international de Gander. A droite, sur la photo, le Surveillant, M. J. Noël, offre un cadeau à M. Stanford.

## Other retirements

J. L. MacMillan, Victoria, February 25—16 years;

Albert G. Milam, Thornadale, Ont., February 3—20 years;

M. T. McGavley, Collingwood, Ont., March 10—26 years;

A. Ramsay, Streetsville, Ont., January 9—12 years;

Mrs. Florence Ada Shea, Toronto, January 22—10 years;

Joseph Watt, Victoria, March 8—33 years;

T. Wilson, St. Catharines, Ont., January 5—10 years □

**47 ANS DE SERVICE**—Certes l'un des plus anciens employés du ministère, M. Joseph Chevalier, qui était, jusqu'en ces derniers temps, maître d'équipage du n.g.c.c. «Tracy», à Sorel, vient de prendre sa retraite après 47 ans et sept mois de service continu. Il a commencé sa carrière comme matelot, en avril 1922, à bord du premier navire désigné sous le nom de «Verchères». En 1929, il devient maître d'équipage à bord du «Safeguarder» et demeure à ce poste jusqu'à ce que ce navire soit retiré du service actif, en avril 1968. Le «Safeguarder» sert maintenant à la formation des élèves-officiers de la Garde côtière canadienne. La même année, soit en 1968, M. Chevalier monte à bord du «Tracy» comme maître d'équipage. C'est là qu'il a terminé sa carrière, à l'Agence maritime de Sorel. Cette photo a été prise à l'occasion d'une fête en son honneur. On voit, de gauche à droite, M. Noël Paquette, agent régional de la marine (Sorel), M. Chevalier et le commandant du n.g.c.c. «Tracy», le capitaine Emile Chassé.

## Other retirements

P. W. T. Adricanse, Longueuil, P.Q. February 20—11 years;

H. D. Bishop, Aylesford, N.S., January 7—13 years;

S. R. Boutillier, Dartmouth, N.S., February 1—11 years;

H. L. Campbell, Prince Rupert, B.C., February 15—26 years;

N. J. Chevalier, St. Joseph de Sorel, P.Q., January 2—47 years;

W. G. Corbett, Prince Rupert, B.C., May 29—20 years;

"Mr. Public Weather"

## Outstanding record of accomplishments in world meteorological circles

One of Canada's best known weathermen, K. T. (Keith) McLeod retired recently from the Ministry of Transport's Meteorological Service after a thirty-two year career.

Born in Beaver, Manitoba in 1909, Keith Thompson McLeod attended school in Rochville, Saskatchewan. After a period of teaching school, he enrolled at the University of Saskatchewan and graduated with an Honours Degree in Science in 1938. He joined the Meteorological Service in 1939 after attaining his M.A., in Meteorology from the University of Toronto.

During the war years, in Gander, Newfoundland, he provided weather forecasts and briefing services to the trans-oceanic ferry flights taking place in support of the war effort. In 1942, he was appointed Officer-in-Charge of this office and was subsequently assigned to take charge of the main Meteorological Office at Montreal. At Montreal he became interested in the application of weather to a wide variety of human activities, an interest which was to remain with him for the remainder of his career and earn him the title of "Mr. Public Weather".



K. T. (Keith) McLeod

In 1950 he was appointed Superintendent of Public Weather at Meteorological Branch Headquarters in Toronto. In this position he quickly guided the Meteorological Branch into various areas where heretofore little had been done to apply scientifically based information to weather-sensitive enterprises. To-day, the close liaison that has been established between agriculturists, forestry, industries, transportation and other vital sectors of our national economy and the Meteorological Service is due, in no small part, to Keith McLeod's efforts.

Mr. McLeod had an outstanding record of accomplishment in world scientific circles. He attended many international meetings as Canada's representative, and from 1960 to 1962 served in Geneva with the World Meteorological Organization (WMO) as a senior official of that body. In 1964 he was elected to a four-year term of President of the WMO's Commission on Maritime Meteorology—a post in which he served with distinction.

Mr. McLeod, on leaving the Meteorological Service, is continuing to serve the cause of international co-operation as an expert with U.N.'s Food and Agriculture Organization in Egypt.

Long active in community affairs, Mr. McLeod is married and has four children. His friends and colleagues in the Meteorological Service feted him at a dinner in the Holiday Inn (west) in Toronto. ☐

### Flight Recorders to Aid Meteorology Data Retrieval

The British Meteorological Office operates for research purposes a Canberra Jet to study high altitude turbulence and a C-130 to study cloud physics. Each of these aircraft is to be equipped by next April with an airborne digital data recording system which will supply meteorological information at a speed and volume hitherto not feasible.



**"TYRO" GOLFER**—A farewell dinner was held in honor of Frank R. Hughes who retired after 29 years' service. He was Regional Controller, Civil Aviation, in Central (Winnipeg) Region at the time of his retirement. Here W. E. Fenn, left, Regional Director, Air Services, Central Region, presents the farewell gift of a set of golf clubs to the "pro" golfer.

**LE GOLFEUR «TYRO»**—Un dîner d'adieu fut donné en l'honneur de Frank T. Hughes qui prenait sa retraite après 29 ans de service au sein du Ministère. A gauche, sur la photo, le Directeur régional des Services de l'Air, Région du centre, M. W. E. Fenn, offre comme cadeau d'adieu un jeu de bâtons de golf au golfeur «tyro».



**LENGTHY SERVICE**—A reception was held at the RCAF Ottawa Officers' Mess to mark the retirement of C. W. Thomas of the Telecommunications and Electronics Branch after 43 years of government service. Mr. Thomas joined the Department of Marine and Fisheries in 1927, his first assignment being radio operator at Point Grey Coast Station, Vancouver. After a two-week indoctrination he was assigned to Alert Bay for two years. During his long and outstanding service, Mr. Thomas took part in the construction of many marine beacons and radio stations, and had the distinction of being involved in the construction of the first ILS systems in Montreal and Vancouver. In the latter years of his government service he had been engaged in practically every aspect of electronic maintenance engineering. From Left: H. J. Williamson, Director Telecommunications & Electronics Branch, C. W. 'Tommy' Thomas, Mrs. Thomas, E. F. Porter, Chief, Maintenance and Operations Division, F. E. Lay, Superintendent, Electronics Maintenance Engineering.



# Transport ALBUM des Transports



## Air Traffic Control

With the increasing volume of air traffic, a more important role than ever is being played by Ministry of Transport electronic technicians throughout the country. At airports it is the job of the Ministry's telecommunications experts to operate and maintain all the electronic equipment and have it as accurate and reliable as possible at all times. For the training of technicians, the Ministry has an Electronic Systems Training Centre near Carp airport, Ontario, where classroom facilities are in close proximity to installed electronic equipment such as Instrument Landing System, radar, Very High Frequency Omni Range, (VOR), etc. It is at this equipment that the students get the practical aspects of training. In the picture are technicians at Carp airport evaluating a flight checking system with a photo theodolite as a Ministry DC-3 approaches the runway.

## Contrôleur de la circulation aérienne

Par suite de l'accroissement de la circulation aérienne, les techniciens en électronique du ministère des Transports jouent un rôle de plus en plus important au Canada. Aux aéroports, ce sont les experts des télécommunications qui doivent faire fonctionner et entretenir tout le matériel électronique et s'assurer que les instruments sont précis et sûrs. Pour la formation des techniciens, le ministère a un Centre de formation des systèmes électroniques en Ontario, près de l'aéroport de Carp, où les classes sont aménagées à proximité du matériel électronique: Système d'atterrissage aux instruments, radar, VOR, etc. C'est en se servant de cet équipement que les élèves acquièrent de la pratique. Sur l'illustration, on aperçoit des techniciens, à Carp, en train d'examiner le système AWA de vérification de l'angle d'approche des aéronefs par un photothéodolite au moment où un DC-3 s'approche de la piste.

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# TRANSPORT

SPECIAL EDITION • 1970



# CANADA

ÉDITION SPÉCIALE • 1970

RÉORGANISATION ET NOMINATIONS  
AU MINISTÈRE FÉDÉRAL DES TRANSPORTS

*Transport ministry  
will be streamlined*

NOMINATIONS AU MINISTÈRE DES TRANSPORTS

Jamieson setting up agency  
to handle Arctic transport

DEPARTMENT OF TRANSPORT  
TO GET CORPORATE STRUCTURE

*User will pay*

Jamieson's new formula for transport

Reorganization aims at recovery  
of transport costs



VOL. 21 No. 3A • 1970  
Special reorganization issue

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Numéro spécial sur la réorganisation

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Rédacteur français Edouard Deslauriers

L'Imprimeur de la Reine, Ottawa, 1970



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### COVER

Remember the newspaper headlines February 17, 1970 announcing the birth of the new Ministry of Transport? In this special issue, we tell you about the new transportation "family" structure.

### COUVERTURE

Vous vous souvenez des manchettes des journaux du 17 février 1970 annonçant la réorganisation du ministère des Transports? Dans cette édition spéciale, nous vous parlons de ces nouvelles structures de notre Ministère.

# The way ahead

The Ministry of Transport's exciting new concept of corporate management was announced by Transport Minister Don Jamieson last February. At that time he gave a general description of the new objectives and broad reorganization to be implemented. Details of the implementation are being resolved by management in a variety of ways and at various levels, particularly in the field, to ensure that what is done makes sense in practical terms. A further step in this direction will be the holding of senior management seminars in Ottawa this fall. The seminars will involve about 250 field managers.

In summary, the principal aims of the new organization are:

- clear objectives from which we hope various units will establish definitive goals for each component of the Ministry during specific time periods;
- a progressive move towards increased recoverable financing as soon as it is possible to do so and where our competitive position will not suffer;
- the establishment of each operating unit with more delegated authority;
- a greater sense of responsiveness to changing technology and genuine public needs;
- a Ministry system of organization and management;
- the fullest use of our human resources in a way in which all employees can be given a maximum role to play with a greater opportunity for their development and advancement.

In order to provide the authority required by the heads of the Administrations to put their operations on a business-like footing and to be held accountable for their management, it is intended that authority will be delegated extensively. Fruitful discussions in this regard have been held with the Public Service Commission and the Treasury Board Secretariat, and they are prepared to delegate much of their authority regarding appointments and classification to the new Ministry. As a result, greater authority will be given to managers, but they will be expected to be accountable for performance.

There is no doubt at the Ministry headquarters that adjustments will have to be made to some of the smaller details in the current program. Each proposal has been examined in depth along the way and the Minister was personally and heavily involved in this consultation. In many cases, changes in direction of what was being proposed were necessary. In developing the plan further, a genuine input from staff throughout the Ministry is needed.

While some changes may well be necessary, it is felt that the basic program represents a sound compromise between turning the department into autonomous Crown Corporations, many of which are sometimes less efficient and responsive than public service organizations, and the former unevenly controlled mix of federal government activities in the field of transportation. The executive is depending heavily on all members of the Ministry to help develop the kind of progressive and responsive organization which the changing Canadian society will demand.

Since it is evident that some of the structural changes, such as the creation of separate administrations, may result in a variety of organizational changes, many employees are no doubt wondering about their own futures. In this respect, the Minister has made it quite clear that only the old organization was found wanting; as far as staff was concerned, no other department of government had a better record of dedication and service to the Canadian public.

# Perspectives d'avenir

Au mois de février dernier, le ministre des Transports, M. Don Jamieson, a annoncé l'intéressant et nouveau concept de gestion par la voie d'entreprises associées, au ministère des Transports. À l'époque il a donné une description générale de ces nouveaux objectifs et de cette réorganisation générale. Les détails de mise en oeuvre sont résolus de diverses façons aux divers échelons de la gestion, en particulier sur le champ d'opération, cette diversité devant permettre de s'assurer que les réalisations ont une signification en termes pratiques. À Ottawa cet automne, des séances d'étude de gestion de niveau supérieur constitueront un nouveau pas dans cette direction. Environ 250 responsables locaux y participeront.

En résumé, les objectifs principaux de la nouvelle organisation sont les suivants:

- dégager les objectifs à partir desquels nous espérons que les divers groupes établiront des buts précis pour chaque unité fonctionnelle du ministère pendant des périodes données,
- amorcer un mouvement progressif vers la récupération des frais dès qu'il sera possible de le faire et chaque fois que notre position concurrentielle n'en souffrira pas,
- donner à chaque unité fonctionnelle une délégation d'autorité accrue,
- faire preuve de plus de souplesse vis-à-vis des progrès de la technologie et des besoins véritables du public,
- créer un système d'organisation et de gestion propres au Ministère,
- utiliser au maximum nos ressources humaines de façon que tous les employés puissent avoir un rôle maximum à jouer et de plus grandes possibilités de perfectionnement et d'avancement.

Afin de fournir aux chefs des Administrations l'autorité requise pour agir comme ils le feraient dans l'entreprise privée, et notamment pour être tenus responsables de leur gestion, il est question de leur déléguer l'autorité de façon considérable. Des discussions fructueuses ont eu lieu à cet égard avec la Commission de la Fonction publique et le Secrétariat du Conseil du Trésor. Ces derniers sont disposés à déléguer une grande partie de leur autorité au nouveau Ministère pour ce qui concerne les nominations et la classification. Il en résulte que les responsables se verront accorder plus d'autorité mais qu'ils seront comptables de l'exécution.

Il ne fait pas de doute, à l'administration centrale du Ministère, que des mises au point devront être apportées aux détails mineurs du programme en cours. Chaque proposition a été examinée en profondeur et le ministre a été personnellement et fortement impliqué dans cette consultation. Dans de nombreux cas il a été nécessaire de s'écarter de ce qui avait été proposé. Pour une bonne mise en oeuvre, une véritable contribution sera exigée du personnel dans tout le ministère. Bien que certaines modifications puissent être nécessaires, on pense que le programme de base représente un juste compromis entre la transformation du Ministère en des Corporations de la couronne autonomes qui sont parfois moins efficaces et moins souples que les organismes de la Fonction Publique, et l'ancien système d'interventions plus ou moins bien dosées du gouvernement fédéral dans le domaine des transports. L'exécutif compte fortement sur l'aide de tous ses fonctionnaires pour réaliser le genre de ministère souple et progressif qu'exigera la société canadienne en cours d'évolution.



It is expected that the reorganization and subsequent developments will provide new opportunities for many who have been making a career in government transport services. Both central and regional management intends to use every means possible to keep employees informed of the progress being made with the reorganization, and to seek their views along the way.

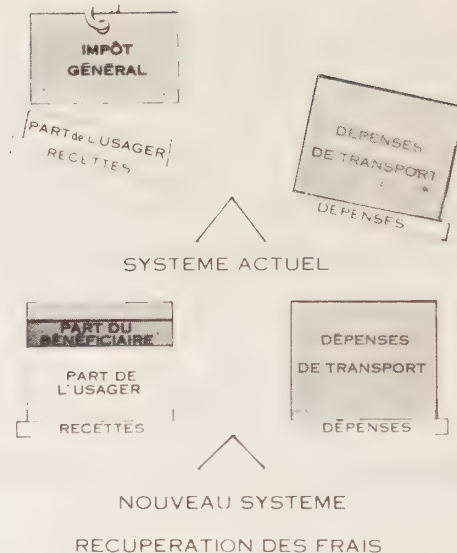
In addition to the management seminars, the heads of the Administrations will be meeting with their managers to discuss plans for the changes which have to be made in each particular field of activity. Serious attention also will be given to the views of all employee associations along the way.

As the first step in reorganizing the federal transport portfolio, J. R. H. Noble, Administrator, Canadian Meteorological Service, was seconded temporarily to head the team responsible for working out the plans and schedule of implementation. Representatives from the principal elements of the new Ministry have been working with him. Actual implementation, of course, is the responsibility of each of the new administrations and agencies in their respective areas. Ministry headquarters will only provide overall direction, guidance and coordination. The executive is counting on the assistance and support of all Ministry employees as the reorganization reaches their areas of responsibility.

The next few years are going to present difficulties as the whole broad spectrum of society is experiencing the shock of change, some of it good, some of it questionable. There should be no doubt in anyone's mind that transportation will continue to be a significant force in holding the Canadian society together and helping the country find its future.

Each of us has an important role to play. It is important that we enjoy our jobs, and in making our contribution to these public goals there should be an exciting future for anyone who wishes to accept the challenge.

O. G. Stoner

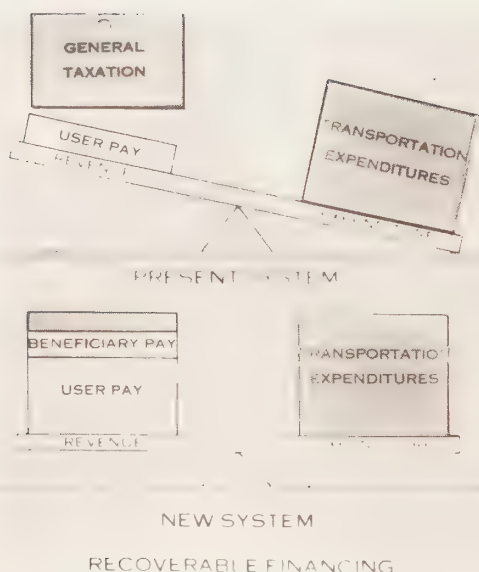


Étant donné que certaines modifications structurales, telles que la création d'Administrations distinctes, peuvent évidemment entraîner des changements dans le personnel, il ne fait pas de doute que de nombreux employés se posent des questions sur leur propre avenir. À cet égard le ministre a bien précisé que seule l'ancienne organisation laissait à désirer. Pour ce qui concerne le personnel, aucun autre ministère du gouvernement n'a autant fait preuve de dévouement et n'a rendu autant de services au public canadien. On prévoit que la réorganisation et les améliorations ultérieures fourniront de nouvelles possibilités pour de nombreux employés qui ont fait carrière dans les services du gouvernement. La gestion centrale et la gestion régionale ont l'intention d'utiliser tous les moyens possibles pour tenir les employés au courant des progrès réalisés dans la réorganisation et pour chercher à connaître leurs points de vue. En plus des séances d'étude de gestion mentionnées ci-dessus, les administrateurs auront des réunions avec leurs chefs de service en vue de discuter des projets de changement qui doivent être réalisés dans chaque domaine d'activité donné. Les points de vue des associations d'employés feront également l'objet d'un examen sérieux.

Lors des premières démarches dans la réorganisation du portefeuille des transports fédéraux, M. J. R. H. Noble, administrateur du Service météorologique du Canada, a été remplacé temporairement pour lui permettre de diriger l'équipe responsable de l'étude des projets et du programme de mise en oeuvre. Des représentants des principaux éléments du nouveau Ministère ont travaillé avec lui. Bien entendu, la mise en oeuvre réelle incombe à chacune des Administrations et à chacun des organismes dans leurs domaines respectifs. L'administration centrale du Ministère ne fera que fournir des indications, des directives et une coordination globales. L'exécutif compte sur l'aide et l'appui de tous les employés du Ministère au fur et à mesure que la réorganisation atteint leur zone de responsabilité.

Les quelques prochaines années vont présenter des difficultés car toutes les couches de la société dans son ensemble subissent le choc des changements, dont certains sont bons, d'autres discutables. Personne ne doit douter que les transports continueront à jouer un rôle notable dans le maintien de la société canadienne et aideront le pays à trouver son avenir. Chacun de nous a un rôle important à jouer. Il est important que nous aimions nos tâches et, en participant à ces objectifs publics, il doit y avoir un avenir passionnant pour quiconque désire relever le défi.

O. G. Stoner



# A new government concept — the corporate family

The Ministry system inaugurated by the Minister of Transport to meet current and foreseen problems envisages a corporate structure of Crown Corporations and operating administrations with varying degrees of autonomy, together with separate regulatory and development agencies.

The reorganization comes at a time when techniques and modes of transportation are developing and increasing very rapidly. Studies already are being made of the relative merits of traditional modes of transportation to meet specific situations, and the effect of introducing new transport technology such as short-takeoff-and-landing aircraft, tracked air cushion vehicles and high-speed trains such as on CNR's Montreal-Toronto turbo-train run.

Inter-modal systems and the gradual introduction of cost-recovery programs supported more by the users and prime beneficiaries, and less by general taxation, are two major aims.

In the new system, the Deputy Minister works closely with the Minister in directing the total complex, and integrating national transportation programs with the activities of other departments and sectors.

Complementing the increased delegation of authority to the operating administrations and agencies, a small ministry headquarters staff supports the Minister and Deputy in planning and policy formulation. As has been done with the Crown Corporations, the performance of each administration will be assessed in large measure on its annual operating reports and projections in support of capital and operating budgets.

## Liaison with Crown Companies

Air Canada and Canadian National Railways continue to operate with existing managerial and corporate autonomy as set out in their respective Acts; their budgets will continue to be examined within the Ministry prior to discussion with Treasury Board and the Department of Finance and before submission to the government, and the Minister will maintain close and effective liaison with the chief executive officers.

A similar relationship will be maintained with Northern Transportation Company Limited, which was formerly the responsibility of the Department of Indian Affairs and Northern Development. This company is concerned primarily with carrying materials to and from the western Arctic by way of the Mackenzie River system.

# Un nouveau concept de gouvernement: Des entreprises associées

Le ministre des Transports, pour résoudre les questions pendantes et les problèmes à venir, envisage — de donner à son Ministère la structure d'entreprises associées, ces entreprises étant les sociétés de la Couronne, les Administrations à caractère fonctionnel, jouissant de l'autonomie à des degrés divers, et enfin des organismes dotés de pouvoirs réglementaires ou tournés vers la recherche et le développement.

Cette réorganisation se fait à un moment où les techniques et les méthodes de transport connaissent un essor et un développement des plus rapides. On est en train de faire des études sur ce que valent, dans des situations données, les méthodes traditionnelles de transport comparées aux nouvelles techniques de transport telles que les aéronefs à décollage et atterrissage courts, les véhicules à coussin d'air et les trains à haute vitesse comme le turbo-train du Canadien National qui relie Montréal à Toronto.

Les systèmes intermodaux et l'introduction graduelle de programmes de récupération des coûts, où ceux-ci seront supportés d'avantage par les usagers et les principaux bénéficiaires, et à un degré moindre par les contribuables, constituent deux objectifs majeurs.

Dans le nouveau système, le sous-ministre collabore étroitement avec le ministre à la direction du système ministériel et à l'intégration des programmes de transport à l'échelle nationale avec les autorités d'autres ministères et d'autres secteurs.

Un personnel restreint attaché au bureau du ministre aide ce dernier ainsi que le sous-ministre dans la planification et la formulation politique, et il complète ainsi l'autonomie de plus en plus grande des Administrations et des organismes fonctionnels. Comme pour les sociétés de la Couronne le rendement de chaque Administration sera évalué dans une large mesure à partir du rapport annuel d'exercice et ses prévisions pour étayer les dépenses d'immobilisations et son budget d'exploitation.

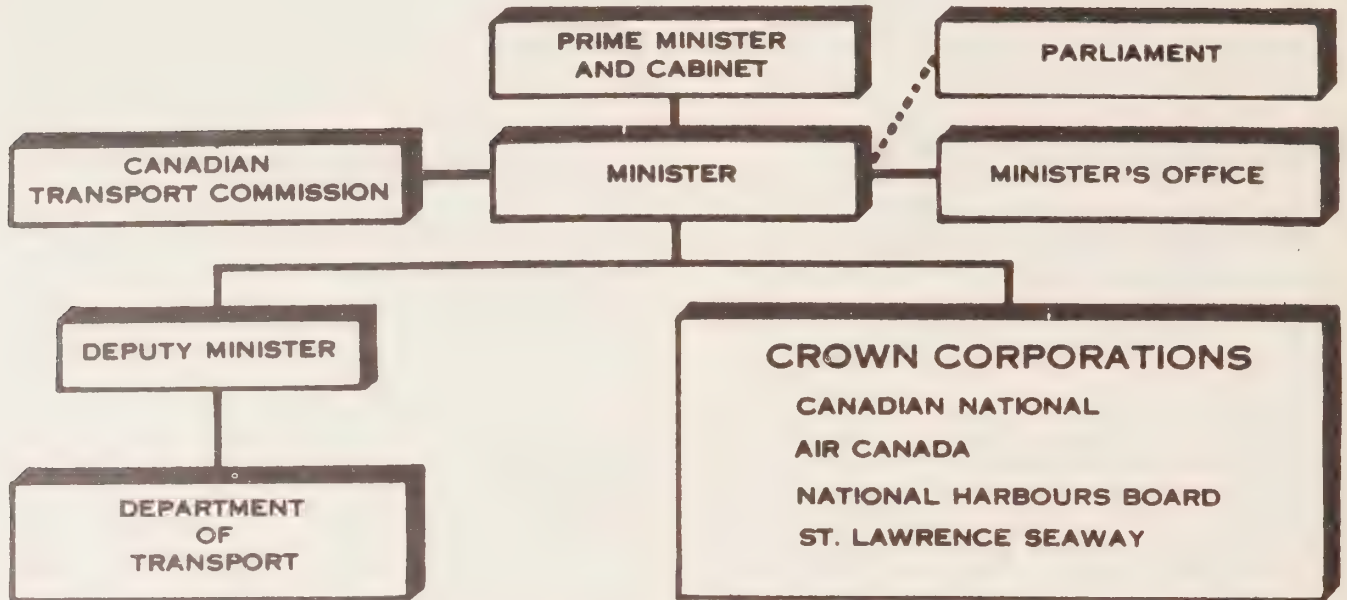
## Liaison avec les sociétés de la Couronne

La Société Air Canada et le Canadien National continuent de fonctionner avec une gestion autonome, comme il est prévu dans leurs chartes respectives. On continuera d'étudier leurs budgets au sein du Ministère avant de les discuter avec le Conseil du Trésor et le ministère des Finances et avant de les soumettre au gouvernement. Le Ministère établira une liaison étroite et efficace avec leurs dirigeants.

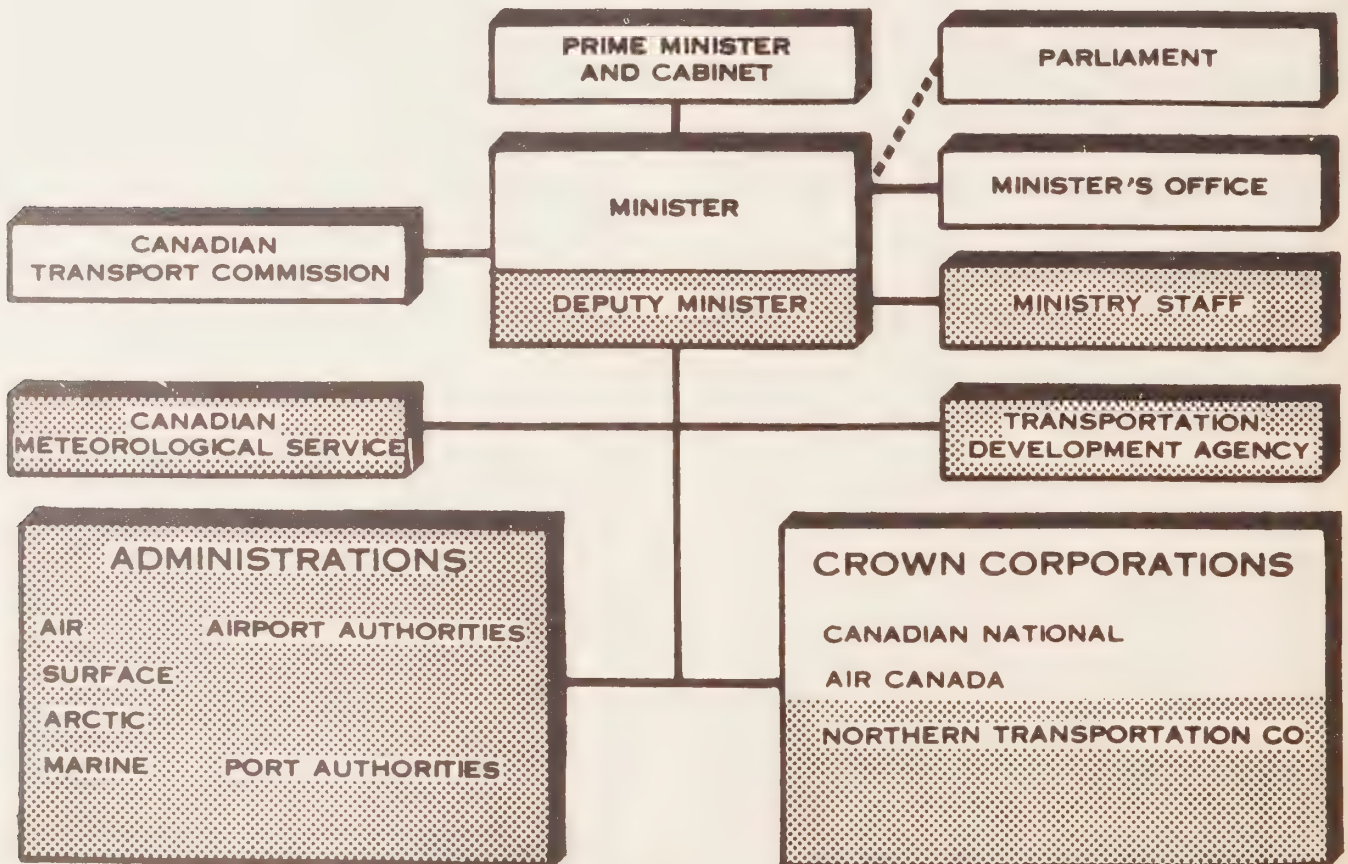
Des relations semblables seront établies avec la *Northern Transportation Company Limited* qui relevait autrefois du ministère des Affaires indiennes et du Nord canadien. Cette compagnie s'occupe principalement du transport de matériel vers et à partir de l'Arctique Ouest par le fleuve Mackenzie.



## DEPARTMENTAL SYSTEM



## MINISTRY SYSTEM



## **Marine Consolidation**

The Canadian Marine Transportation Administration brings together the functions of the St. Lawrence Seaway Authority, the National Harbours Board and the Marine Services Component of the old Department of Transport.

Its operations include management of the St. Lawrence Seaway through the St. Lawrence Seaway Authority; direct supervision of eight harbours and other facilities through the National Harbours Board; 300 public harbours and 11 others administered by commissions under the supervision of the Ministry. It also is responsible for aids to navigation, nautical and pilotage services, marine agencies, steamship inspection and the Canadian Coast Guard. Responsibility for secondary canals is being transferred to the Department of Indian Affairs and Northern Development.

## **Air Administration**

The Canadian Air Transportation Administration operates Canada's airways and federal airports through its branches of civil aviation, telecommunications and electronics, construction engineering and architectural, airports and field operations, planning research and development, and air traffic control. The administration also is charged with responsibility for the technical supervision of all aeronautical activities in the flight safety sense and provides air traffic control as well as telecommunications and flight services to other components of the Ministry.

## **Met. Now Separate Administration**

The Canadian Meteorological Service, formerly a branch of Air Services in the former Department of Transport, is now a separate administration. It continues to provide meteorological service and ice information in response to the needs of a broad spectrum of segments of the national economy and promotes the application and development of meteorological services.

## **New Role**

A Canadian Surface Transportation Administration now being organized brings together those elements of the former Department of Transport dealing with the programming and planning for federal participation in the operation and coordination of highway, rail and ferry transportation.

The Arctic Transportation Agency is in the process of being organized for effective liaison with the Department of Indian Affairs and Northern Development and other interests within the Territories to co-ordinate transportation functions to cater to the special needs of the Arctic. It also will maintain general liaison with others interested in the solution of transportation problems in the Canadian North.

## **Research and Development**

The Transportation Development Agency is responsible for developing and co-ordinating technological research. It will work closely with government agencies and the academic and scientific community to provide the national focus for changing technology and development in the field of transportation.

## **Centralisation de la Marine**

L'Administration canadienne du transport maritime englobe les fonctions de l'Administration de la Voie maritime du Saint-Laurent, le Conseil des ports nationaux et l'ensemble des Services de la Marine de l'ancien ministère des Transports. Ces activités comprennent la gestion de la Voie maritime du Saint-Laurent par l'entremise de l'Administration du même nom; le contrôle direct de huit ports et autres installations portuaires par l'entremise du Conseil des ports nationaux; 300 ports publics et 11 autres ports administrés par des Commissions relevant du Ministère. Elle est également responsable des Aides à la navigation, des services nautiques et de pilotage, des organismes maritimes, de l'inspection des navires et la Garde côtière canadienne. Toutefois, on est en train de transférer la juridiction sur les canaux secondaires au ministère des Affaires indiennes et du Nord canadien.

## **Administration des transports aériens**

L'Administration canadienne des transports aériens s'occupe des lignes aériennes du Canada et des aéroports fédéraux par l'entremise de ses bureaux de l'aviation civile, de télécommunications et d'électronique, du génie civil et architectural, ses opérations sur les pistes et les aéroports, ses activités dans le domaine de la recherche et le développement et par le contrôle de la circulation aérienne. L'Administration est également responsable de la surveillance technique de toutes les activités aéronautiques dans le domaine de la sécurité de vol et fournit des services de contrôle de la circulation, de télécommunications et de vol à d'autres secteurs du ministère.

## **Administration autonome du Service de Météorologie**

Le Service météorologique du Canada, qui était autrefois une direction des Services de l'air, est maintenant autonome. Il continue à fournir des services météorologiques, des renseignements sur les glaces; il répond ainsi aux besoins d'un large secteur de l'économie nationale et il veille en même temps à l'application et au développement des services météorologiques.

## **Nouvel organisme**

L'Administration canadienne des transports de surface qu'on est en train de mettre sur pied regroupe les éléments de l'ancien ministère des Transports, qui s'occupent de la programmation et la planification fédérale dans des activités par lesquelles le gouvernement fédéral participe à l'exploitation et la coordination des transports par route, par chemin de fer et par bac-transbordeur.

L'Agence des transports dans l'Arctique est en voie d'organisation et aura comme objectif d'établir une liaison véritable avec le ministère des Affaires indiennes et du Nord canadien et d'autres organismes à l'intérieur des Territoires, de coordonner les moyens de transport de façon à répondre aux exigences spéciales de l'Arctique, et de maintenir des relations générales avec les organismes qui s'intéressent aux problèmes de transport dans le Nord canadien.

## **Recherche et développement**

Le Centre de développement des Transports est chargé du développement et de la coordination de la recherche technique, et du travail en étroite collaboration avec les agences du Ministère et les milieux académiques et scientifiques, de façon à devenir le point de mire national en ce qui a trait aux progrès techniques et au développement dans le domaine des transports.



## Northern Transportation Company

# VOLUME OF FREIGHT GROWS WITH NEW DEVELOPMENTS IN ARCTIC



W. M. Gilchrist

As oil operations on the North Alaska coast continue to grow in a spectacular manner, development activities in the northern area serviced by Northern Transportation Company Limited are expanding.

W. M. Gilchrist, President of Northern Transportation, a Crown Corporation answering to the Ministry of Transport, told "Transport" that while exploration in the Canadian Arctic archipelago did not locate any commercial oil pools, appreciable reserves of gas were uncovered, increasing the already high probability of finding oil. Both these developments stimulated exploration in the Mackenzie watershed.

With these developments it is inevitable that the volume of freight will continue to increase in the northern area serviced by the company, says Mr. Gilchrist. The company is continually on the move to meet the increase in demand by ordering additional marine equipment, and in addition, it will be necessary to expand the capacity of shore installations.

Total freight revenues for last year amounted to \$8,492,270, an increase of 55 per cent over revenues for the previous year. Total operating costs increased by 54 per cent.

Tonnage handled in the same year increased by 24 per cent, both cases being very close to estimates. To meet

this increased freight, 24 new and larger barges went into service and three new tugs were operating by the end of the season.

Mr. Gilchrist says that a major difficulty experienced during the year was the record low water in many parts of the watershed. This aggravated the problems of moving equipment in certain areas and resulted in a high incidence of damage to boats and barges. Nevertheless, all freight consigned to the company by the published deadlines was delivered — even some that was late in arriving at the receiving depots.

Due to improvements in the river channel and others which are contemplated, he says it is improbable that the effect of low water will be as severe in the future.

### History of company

The history of Northern Transportation dates back to 1931, when two Edmonton businessmen, C. Becker and C. Murdoff, began to provide service as a common carrier on the Mackenzie River between Waterways, Alberta and Aklavik, N.W.T. Their enterprise bore the name Northern Waterways Limited and made a modest beginning with one wooden vessel and two barges. In 1933 the service was extended into Bear River and Great Bear Lake to meet the needs of

the Eldorado Mine at Port Radium.

The company changed hands in 1934 and the name was altered to Northern Transportation Company Limited. Eldorado Gold Mines Limited acquired the company in 1936, and it became a Crown Corporation after its parent, Eldorado Mining and Refining (now Eldorado Nuclear Limited), was expropriated by the Government of Canada.

Initiation of the Canol Project in 1941, and re-opening of the Port Radium mine in 1942, brought all Northern Transportation Company equipment into service for the duration of World War II. The Canol Project, an abortive World War II effort, was the northern terminus of an air route built by the Americans to connect the railheads at Peace River or Waterways. The project was abandoned in 1944 and the company contracted to bring out 25,000 tons of equipment and materials. When this major task was complete, the company carried on as a carrier of a growing volume of commercial freight.

In 1946 all transportation on the Mackenzie system was brought under regulations of the Board of Transport Commissioners. When Hudson's Bay Transport discontinued operation as a common carrier in 1947, Northern Transportation Company added vessels to handle the additional freight.

## Extended operations

The company extended its operation into the Western Arctic for the first time in 1949, when it was requested by the R.C.A.F. to operate the supply ship *Snowbird* between Tuktoyaktuk and Cambridge Bay. Subsequently, the *Radium Dew* and three steel barges were built for delivery of construction materials and equipment for six DEW-SP Line installations in the Mackenzie Delta, beginning in 1955. Three years later the company began re-supply of 25 DEW Line sites along the Arctic Coast, operating landing craft and tankers made available under a loan agreement between the United States and Canadian governments.

When uranium mines around Lake Athabasca were coming into the development and production stage in 1956, Northern Transportation Company built three new vessels and 27 steel barges to take care of the heavy increase in freight. Some of this equipment went into moth-balls in 1960, when five mines in the Beaverlodge area, as well as the Port Radium mine, ceased operations.

In 1963, at the request of the Hudson's Bay Company, Northern Transportation Company took over the Arctic freight service provided by that organization, and acquired the motor vessel *Banksland*. The following year construction was started on the motor vessel *Frank Broderick*, which began plying out of her home base, Tuktoyaktuk, in July 1965.

Early in 1965 the company acquired Yellowknife Transportation Company Limited, Arctic Shipping Limited and De-cury Supply Limited, which had carried on somewhat paralalled shipping services, now integrated with those of Northern Transportation Company. The fleet now comprises 24 tugs, all equipped with two-way radio, radar, and echo-sounders; 134 all-steel barges of various types and sizes, including some refrigerated units; and two Arctic cargo vessels. A further eight 250-foot steel barges and another tug for use in the Arctic are under construction.



**A GREAT HIGHWAY** — The Mackenzie Route to the Western Arctic is a 4,000-mile system embracing the Mackenzie Basin, and the Western Arctic from Boothia Peninsula to Prudhoe Bay in Alaska.

**UNE LONGUE ROUTE** — La route du Mackenzie vers l'Arctique de l'Ouest est longue de 4,000 milles et comprend le bassin du Mackenzie et l'Arctique de l'Ouest, depuis la péninsule de Boothia jusqu'à Prudhoe Bay, en Alaska.



## ACCROISSEMENT DU VOLUME DU FRET ATTRIBUABLE AUX DÉVELOPPEMENTS DANS L'ARCTIQUE

À mesure que s'accroît le nombre de découvertes de gisements pétroliers sur la côte nord de l'Alaska, les travaux d'aménagement dans la région septentrionale desservie par la Northern Transportation Company Limited prennent de l'ampleur.

Le président de la Northern Transportation, société de la Couronne qui est comptable au ministère des Transports, M. W.M. Gilchrist, a déclaré au représentant du magazine «Transport» que même si l'exploration de l'archipel de l'Arctique canadien n'avait pas révélé l'existence de gisements de pétrole commercial, la découverte de réserves impor-

tantes de gaz aurait entraîné probablement celle du pétrole. Ces deux découvertes ont stimulé les travaux d'exploration dans le bassin du Mackenzie.

Par suite de ces découvertes, il est inévitable que le volume de fret continue de s'accroître dans la région septentrionale desservie par la compagnie, déclare M. Gilchrist. La société travaille sans cesse pour répondre à l'augmentation de la demande en commandant un équipement maritime supplémentaire; il faudra, en outre, accroître la capacité des installations côtières.

Le total des recettes provenant du fret

pour l'an dernier s'est établi à \$8,492,270, soit une augmentation de 55 p. 100 par rapport à l'année précédente. Les frais d'exploitation, au total, ont augmenté de 54 p. 100.

Le tonnage manutentionné au cours de la même année a augmenté de 24 p. 100; dans ces deux cas, les résultats se sont avérés très près des prévisions. Pour assurer la manutention de cet accroissement de fret, on a mis en service 24 nouveaux chalands d'une jauge plus forte et trois remorqueurs étaient entrés en service vers la fin de la saison.

M. Gilchrist a déclaré que le bas ni-



ARCTIC BASE — The tanker *Pinnebog* entering the floating drydock at the Arctic base of Northern Transportation Company at Tuktoyaktuk, N.W.T.

BASE DE L'ARCTIQUE — Le pétrolier *Pinnebog* fait ici son entrée dans une cale sèche flottante de la base de l'Arctique de la Northern Transportation Company à Tuktoyaktuk (T.N.-O.).

veau record des eaux dans plusieurs sections du bassin constituait l'une des plus graves difficultés auxquelles on ait eu à faire face au cours de l'année. Cette situation a aggravé le problème du transport de l'équipement à certains endroits et a provoqué de très fréquentes avaries aux bateaux et aux chalands. Néanmoins, tout le fret confié à la société dans les délais prévus a été livré, même certaines commandes qui étaient parvenues en retard aux dépôts de réception.

Étant donné les améliorations apportées au chenal du fleuve et d'autres qui sont projetées, M. Gilchrist déclare qu'il est improbable que l'effet du bas niveau des eaux soit aussi sérieux à l'avenir.

### Histoire de la Société

L'histoire de la Northern Transportation remonte à 1931 alors que deux hommes d'affaires d'Edmonton, MM. C. Becker et C. Murdoff, entreprirent d'assurer un service de transport public dans le fleuve Mackenzie entre Waterways (Alb.) et Aklavik (T.N.-O.). Leur entreprise portait la raison sociale Northern Waterways Limited et elle connut un début modeste avec un navire en bois et deux chalands. En 1933, le service s'étendit à la Grande rivière de l'Ours et au Grand lac de l'Ours afin de répondre aux besoins de la mine Eldorado, à Port Radium.

En 1934 la société changea de propriétaire et de raison sociale qui devint Northern Transportation Company Limited. La société Eldorado Gold Mines Limited fit l'acquisition de la Northern Transportation en 1936; puis, cette dernière devint une société de la Couronne lorsque la société mère, l'Eldorado Mining and Refining (maintenant Eldorado Nuclear Limited), fut expropriée par le gouvernement du Canada.

L'entreprise du projet Canol, en 1941,

et la réouverture de la mine de Port Radium, en 1942, remirent en service tout le matériel de la société Northern Transportation pour toute la durée de la seconde Grande guerre. Le projet Canol, tentative infructueuse de la seconde Grande guerre, constitua le terminus nord d'une route aérienne établie par les Américains pour se relier aux terminus ferroviaires de Rivière-de-la-Paix et de Waterways. Le projet fut abandonné en 1944 et la société passa un contrat pour le transport de 25,000 tonnes de matériel et de matériaux. Lorsque cette tâche importante prit fin, la société continua de transporter un volume croissant de fret commercial.

En 1946, tous les transports du réseau du Mackenzie furent placés sous le contrôle de la Commission des transports du Canada. Lorsque la Hudson's Bay Transport cessa d'exploiter son service de transport public, en 1947, la société Northern Transportation acquit d'autres navires pour transporter le fret supplémentaire.

### Croissance de l'exploitation

La société porta son exploitation jusque dans l'ouest de l'Arctique pour la première fois, en 1949, lorsque l'ARC lui demanda d'exploiter le navire de ravitaillement *Snowbird* entre Tuktoyaktuk et Cambridge Bay. Plus tard, le *Radium Dew* et trois chalands d'acier furent construits pour assurer la livraison de matériaux et d'équipement de construction pour six installations de la ligne DEW-SP, dans le delta du Mackenzie, à compter de 1955. Trois ans plus tard, la société entreprit le ravitaillement de 25 postes de la ligne DEW le long du littoral de l'Arctique, en utilisant des LST et des pétroliers mis à sa disposition en vertu d'un accord de prêt intervenu entre les gouvernements américain et canadien.

Lorsque les mines d'uranium autour du lac Athabasca atteignirent le stade de l'aménagement et de la production, en 1956, la société Northern Transportation construisit trois nouveaux navires et 27 chalands d'acier pour répondre à la forte augmentation du fret. Une partie de ce matériel fut mis en réserve en 1960 lorsque cinq mines de la région de Beaverlodge, ainsi que celle de Port Radium, cessèrent leur exploitation.

En 1963, à la demande de la compagnie de la Baie d'Hudson, la société Northern Transportation prit en charge le service de transport dans l'Arctique assuré par la compagnie de la Baie d'Hudson, et elle fit l'acquisition du navire à moteur *Banksland*. L'année suivante, la construction du n.m. *Frank Broderick* fut entreprise; ce navire commença à desservir son port d'attache de Tuktoyaktuk, en juillet 1965.

Au début de 1965, la société fit l'acquisition des sociétés Yellowknife Transportation Limited, Arctic Shipping Limited et Decury Supply Limited qui avaient assuré des services de navigation quelque peu parallèles, que la Northern Transportation a maintenant unifiés. La flotte comprend maintenant 24 remorqueurs, tous équipés d'appareils radio émetteurs-récepteurs, de radars et de sondeurs à ultrasons; 134 chalands d'acier de divers types et dimensions, y compris des chalands frigorifiés; et deux navires de charge de l'Arctique. On est en train de construire huit autres chalands d'acier de 250 pieds et un autre remorqueur qui seront utilisés dans l'Arctique.



# LEADERSHIP IN PROFILE

Leadership of the new Ministry of Transport is provided by executives of various backgrounds, scholastic disciplines and fields of experience. As a sampling of this highly qualified team, we have sketched in very briefly the backgrounds of some of the more senior officers in the Ministry. Additional appointments will be made in the near future.

**The Honourable Don C. Jamieson, P.C., M.P.**, 49, Minister of Transport since May 5, 1969, is a native of St. John's Newfoundland. Mr. Jamieson was connected with the fishing and beverage industry before entering the broadcasting field, becoming President of the Newfoundland Broadcasting Company Limited and also serving as a director of the Canadian Television Network. He served on several committees for both government and private industry which studied various aspects of Canadian broadcasting. He was a member of the Board of Broadcast Governor's Consultative Committee on Private Broadcasting in 1969 and in 1966 he wrote *The Troubled Air*, an analysis of Canadian broadcasting.

Mr. Jamieson has represented the Newfoundland constituency of Burin-Burgeo since 1966. He was appointed Minister of Defence Production in 1968, and of Supply and Services when that department was created in April, 1969.

As a private member, Mr. Jamieson was a member of the Parliamentary Standing Committees on Fisheries, and Transport and Communications. He also served on the House of Commons Committee on Broadcasting, Films and Assistance to the Arts.

**Gérard Loiselle M.P.**, 49, Parliamentary Secretary to the Minister of Transport, has represented the riding of Saint-Henri, Montreal, since 1957. Born in Montreal, Mr. Loiselle attended St. Arsene College and O'Sullivan Business College. He is a graduate in Political Science from Sir George Williams University. An insurance broker for Laporte and Loiselle Inc., he is also a director of Loiselle Petroleum. Mr. Loiselle was re-elected to the Montreal City Council five times, the last in 1966. In that same year, he was selected to be a member of the first Canadian Delegation to Poland. He received his present appointment in 1969, following a similar appointment to the Minister of Manpower and Immigration.

# CROQUIS DE NOS HAUTS FONCTIONNAIRES

A la tête du ministère des Transports on trouve des fonctionnaires qui ont un passé, une culture et une expérience variés. Pour vous donner une idée de ce que peut être cette équipe dirigeante très compétente, nous avons rappelé à votre intention les antécédents de quelques-uns des fonctionnaires supérieurs du Ministère. Cette énumération n'est pas limitative. D'autres nominations seront faites dans un proche avenir.

**L'Honorable Don C. Jamieson, C.P.**, député, âgé de 49 ans et ministre des Transports depuis le 5 mai 1969, est natif de Saint-Jean (T.-N.). M. Jamieson avait des intérêts dans l'industrie de la pêche et celle des boissons avant de s'intéresser à la radiodiffusion et de devenir président de la *Newfoundland Broadcasting Company Limited* et l'un des directeurs de la C.T.V. Il a été membre de plusieurs comités d'étude de la radiodiffusion dus à l'initiative tant du gouvernement que de l'industrie privée notamment du Comité consultatif sur la radiodiffusion privée du Bureau des gouverneurs de la radiodiffusion.

M. Jamieson représente la circonscription électorale de Burin-Burgeo (T.-N.) depuis 1966. En 1968, il a été nommé ministre de la Production de défense et lors du remaniement et de la nouvelle appellation de ce ministère, en avril 1969, ministre des Approvisionnements et Services.

A titre de simple député, M. Jamieson a été membre des Comités parlementaires permanents sur les pêcheries et sur les transports et les communications. De plus, il a fait partie du Comité des Communes sur la radiodiffusion, les films et l'assistance aux arts.

**M. Gérard Loiselle**, député, âgé de 49 ans, Secrétaire parlementaire du ministre des Transports, représente la circonscription électorale de Saint-Henri, Montréal, depuis 1957. Natif de Montréal, M. Loiselle a fréquenté le collège Saint-Arsène, le *O'Sullivan Business College* et il a reçu un diplôme en sciences politiques de l'Université Sir George Williams. Il est courtier d'assurances chez Laporte et Loiselle Inc. et l'un des directeurs de la société Loiselle Petroleum. M. Loiselle a été élu cinq fois au Conseil de ville de Montréal, la dernière fois en 1966. La même année il a été choisi pour faire partie de la première visite officielle du Canada en Pologne. Il occupait le poste de secrétaire parlementaire du ministre de la Main-d'oeuvre et de l'Immigration avant d'être nommé au ministère des Transports en 1969.

**O. G. Stoner**, 48, Deputy Minister of the Ministry of Transport, has been Deputy Minister of Transport since February, 1969. Born in London, Ontario, he was educated at the University of Western Ontario and Queen's University. During World War Two he served with the Canadian Armoured Corps in Europe and was mentioned in dispatches.

Mr. Stoner entered the Department of External Affairs in 1947. Following assignments in Canada and abroad, he was in charge of economic affairs of the Department of External Affairs from 1959 to 1964.

In 1964, he was appointed Senior Assistant Secretary to the Cabinet with special responsibility for economic matters. He was also secretary of the Cabinet Committee on Transportation and Communications, and served as chairman of the inter-departmental committee studying the expansion of the Seaway. He was also one of the principal negotiators of the major revision of the U.S.-Canada bi-lateral air agreement in 1965-66.

He was acting Secretary to the Cabinet and acting Clerk of the Privy Council from August 1967 until June 1968, when he was appointed Deputy Secretary to the Cabinet and Deputy Clerk of the Privy Council, with particular responsibility for the operations of the Cabinet and the new Cabinet committee structure established by the Prime Minister shortly after he took office.

**G. A. (George) Scott**, 54, Senior Assistant Deputy Minister, was previously Assistant Deputy Minister, Air, in the old Department of Transport. Born in Bassano, Alberta, he obtained degrees in Economics from the University of Alberta, the University of Toronto, Wharton Graduate School and the University of Pennsylvania, where he was awarded a Ph.D. Following service in the RCAF, he joined the Department of Reconstruction and Supply and later transferred to the Air Transport Board as an economist, holding progressively more responsible positions with the Board of Transport Commissioners and the Department of Transport.

**Dr. Pierre Camu**, 47, Administrator, Canadian Marine Transportation Administration, remains President of the St. Lawrence Seaway Authority, which is part of the new Ministry organization.

Born in Montreal, Dr. Camu studied International Economics and Economic Geography at John's Hopkins University and the University of Montreal, obtaining his Ph.D. in Economic Geography from the latter.

After service with the Geographical Division, Department of Mines and Technical Surveys, he joined the faculty of Laval University, where he was retained by numerous organizations in Canada and the United States as a consultant on shipping. In 1958, on a Nuffield fellowship, he conducted a special survey of British ports.

Appointed Fellow of the Royal Society of Canada in 1966, Dr. Camu has served as President of the Canadian Transportation Research Forum and of the Royal Canadian Geographical Society. He became President of the St. Lawrence Seaway Authority in 1965.

**William H. Huck**, 56, Administrator, Canadian Air Transportation Administration, was formerly Assistant Deputy Minister (materiel management), Department of Supply and Services.

**M. O. G. Stoner**, âge de 48 ans, sous-ministre des transports depuis février 1969 est natif de London (Ont.) et il a fait ses études à l'Université Western (Ont.) et à l'Université Queen's. Au cours de la Seconde Guerre mondiale il a servi au *Canadian Armoured Corps* en Europe et a été cité à l'ordre du jour. M. Stoner est entré au ministère des Affaires extérieures en 1947 et, à la suite de missions au Canada et à l'extérieur, il a été chargé des affaires économiques du Ministère de 1959 à 1964.

En 1964, il a été nommé premier secrétaire adjoint du Cabinet chargé spécialement des affaires économiques. Il a aussi été secrétaire du Comité du Cabinet sur le transport et les communications et encore président du Comité interministériel chargé d'étudier l'agrandissement de la Voie maritime. M. Stoner a été l'un des principaux négociateurs de l'importante révision de l'accord aérien bilatéral entre le Canada et les États-Unis en 1965 et 1966.

M. Stoner fut secrétaire du Cabinet et greffier suppléant du Conseil privé d'août 1967 à juin 1968, après quoi il fut nommé secrétaire adjoint auprès du Cabinet et greffier adjoint du Conseil privé avec la responsabilité particulière des travaux du Cabinet et du nouveau comité du Cabinet établi par le Premier ministre peu après son entrée en fonctions.

Âgé de 54 ans, et premier sous-ministre adjoint, **M. G. A. (George) Scott** était auparavant sous-ministre adjoint de l'Air dans l'ancien ministère des Transports. M. Scott est né à Bassano (Alb.) et il est diplômé en économie de l'Université de l'Alberta, de l'Université de Toronto, du *Wharton Graduate School* et il a obtenu un doctorat de l'Université de Pennsylvanie. Après avoir servi dans l'A.R.C., il entra au ministère de la Reconstruction et des Approvisionnements et fut, plus tard, muté à la Commission des transports aériens, à titre d'économiste; depuis ce temps, il a occupé des postes de plus en plus importants au sein de la Commission des transports et du ministère des Transports.

Administrateur des transports maritimes au Canada, **M. Pierre Camu**, âgé de 47 ans, demeure le président de l'Administration de la voie maritime du Saint-Laurent qui fait partie de l'organisation du nouveau Ministère.

M. Camu, né à Montréal, a étudié l'économie internationale et la géographie économique à l'Université John's Hopkins et à l'Université de Montréal où il a obtenu un doctorat en géographie économique.

Après avoir servi à la Division géographique du ministère des Mines et des Relevés techniques, il a fait partie du corps professoral de l'Université Laval; il a été conseiller maritime et ses services ont été retenus par de nombreux organismes de l'est du Canada et des États-Unis. En 1958, grâce à une bourse Nuffield, il dirigea une étude spéciale sur les ports britanniques.

M. Camu est membre de la Société Royale du Canada depuis 1966 et il a été président du groupe de recherche du transport au Canada et de la *Royal Canadian Geographical Society*. En 1965, il devenait président de l'Administration de la Voie maritime du Saint-Laurent.

L'Administrateur des transports aériens du Canada, **M. William H. Huck**, âgé de 56 ans, était sous-ministre adjoint (gestion du matériel) au ministère des Approvisionnements et Services.



# TRANSPORTATION COUNCIL

The Transportation Council is the meeting place for the federal transport "family". As such it provides a focal point where the various members can come together and exchange views. It meets once a week and it enables the Minister, who presides at the sessions, to maintain a close and continuing dialogue between the senior officers of the Ministry.

At these meetings, the major decisions are made that affect the Ministry's complex and far-flung operations. No single facet of the country's transportation network can work in isolation. It must take into account the other forms of transportation. How best to tie in with one or more of these others for the common good?

At the Council long-range plans are advanced, debated and final decisions reached. One of the most obvious advantages is that of co-ordination. Those with responsibilities in the fields of road and rail, air and water, inform, and are informed, at the Transportation Council meetings.

This is what takes place at the Transportation Council meetings each week.



*Minister of Transport  
Hon. Don Jamieson  
Ministre des Transports*



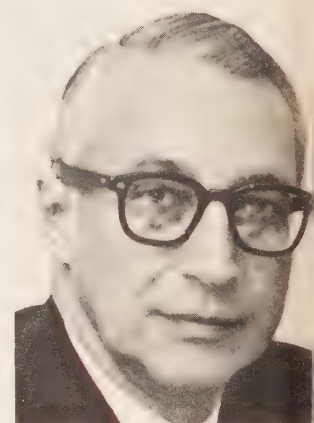
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Gérard Loiselle, M.P.  
Secrétaire parlementaire*



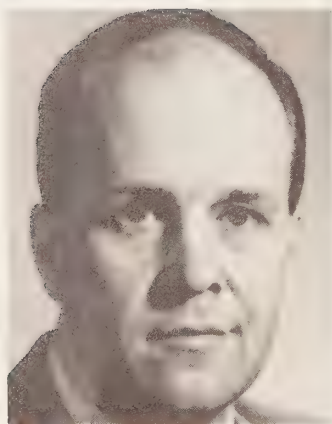
*Senior Assistant  
Deputy Minister  
G. A. Scott  
Sous-ministre  
adjoint principal*



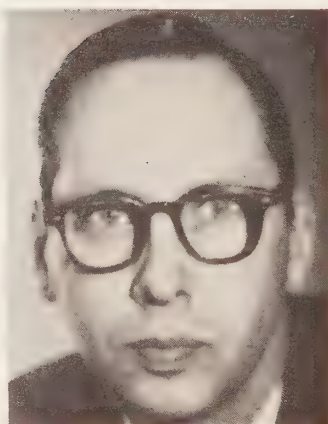
*Administrator,  
Canadian Marine  
Administration  
P. Camu  
Administrateur  
des transports maritimes  
du Canada*



*Administrator,  
Canadian Air Transportation  
Administration  
W. H. Huck  
Administrateur  
des transports aériens  
du Canada*



*Chairman,  
Transportation Development  
Agency  
John Gratwick  
Président  
du Centre de développement  
des transports du Canada*



*Senior Ministry Executive,  
Personnel Organization  
and Management Review  
W. F. Nelson  
Chef exécutif de l'état-major  
du Ministère  
Personnel,  
revue de l'organisation  
et de la gestion*



*Senior Ministry Executive,  
Policy, Planning  
and Coordination  
C. C. Halton  
Chef exécutif de l'état-major  
du Ministère  
Méthodes, planification  
et coordination*

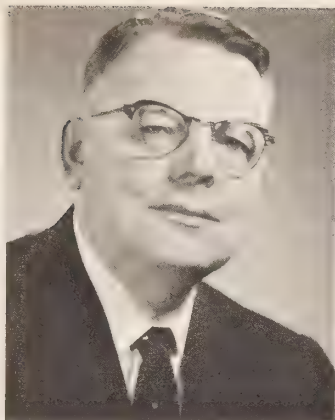


*Director, Legal Services  
Department of Justice  
J. T. Gray  
Directeur du Contentieux  
Ministère de la Justice*

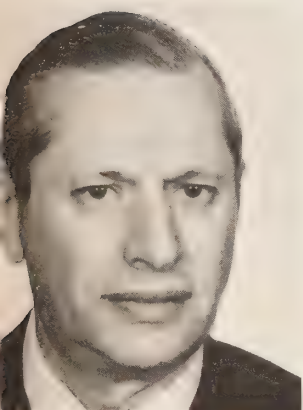




*Deputy Minister  
O. G. Stoner  
Sous-ministre*



*President,  
Canadian Transport  
Commission  
Hon. J. W. Pickersgill  
Président,  
Commission canadienne  
des transports*



*Assistant Deputy Minister,  
Finance  
I. C. Cornblat  
Sous-ministre adjoint,  
Finances*



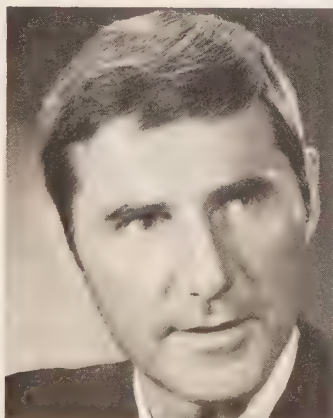
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Northern Transportation  
Company Ltd.  
W. M. Gilchrist  
Président,  
Northern Transportation  
Company Ltd.*



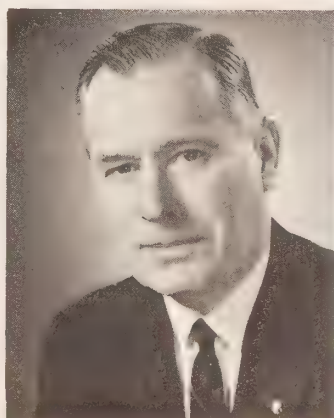
*Administrator,  
Canadian Meteorological  
Services  
J. R. H. Noble  
Administrateur  
du Service météorologique  
du Canada*



*Executive Assistant  
to Minister  
Andrew Chatwood  
Chef de cabinet  
du Ministre*



*Director,  
Bureau of Coordination  
Executive Secretary  
of the Transportation Council  
André Laframboise  
Directeur  
du Bureau de coordination  
Secrétaire exécutif  
du Conseil des transports*



*Executive Assistant  
to Deputy Minister  
Stuart T. Grant  
Adjoint exécutif  
du Sous-ministre*



*Director,  
Information Services  
Robert Turner  
Directeur  
du Service d'information*

# CONSEIL DES TRANSPORTS

Le Conseil des transports est le lieu de rencontre de la «famille» des transports nationaux. Il constitue le point de ralliement où les divers membres se rencontrent et échangent des opinions. Les réunions hebdomadaires du Conseil permettent au Ministre qui préside aux sessions d'entretenir une relation étroite et continue avec les fonctionnaires supérieurs du Ministère.

C'est au cours de ces réunions que sont prises les décisions importantes qui influent sur les travaux complexes et de grande envergure du Ministère. Aucun domaine du réseau des transports nationaux ne peut être traité séparément, car il faut tenir compte de toutes les formes de transport. Comment, dans ce cas, peut-on mieux réunir les aspects de ces différents domaines pour le bien commun?

Le Conseil propose des plans d'action à long terme, les discute et prend des décisions. La coordination, l'un des plus grands avantages de cette formule, permet aux responsables des transports par route, par rail, par air et par eau, de fournir des renseignements et d'être renseignés lors des réunions du Conseil des transports.

Voilà ce qui se passe chaque semaine aux réunions du Conseil!



A chartered accountant and graduate of Queen's University, Mr. Huck has had considerable experience in many sectors of government and three years with industry.

He joined the Public Service in 1945 with the Comptroller of the Treasury. He also has served with the Department of National Revenue and the Department of Defence Production, where he was financial advisor before becoming Assistant Deputy Minister.

Mr. Huck has served on numerous international committees and boards and as a director of two Crown-owned companies.

As Assistant Deputy Minister, Finance, **I. C. Cornblat**, 56, is the Ministry's chief advisor on financial management. A former Air Vice Marshal, he had a distinguished career with the RCAF from 1937 until his retirement in 1963 as Comptroller of the RCAF and a Member of the Air Council. Following his military service, Mr. Cornblat became Vice-President, European Operations for the Canadair Division of General Dynamics Corporation. Upon his return to Canada he was named Assistant to the President, Canadair, and lived in Montreal until his present appointment.

**J. R. H. (Reg) Noble**, 58, Administrator, Canadian Meteorological Service, has been serving as head of the task force on implementation of the organization.

Mr. Noble, who was appointed Director of Meteorology in the Department of Transport in 1964, has been active in the meteorological field for 33 years. He holds a Master's degree in Physics (Meteorology) from the University of Toronto and a Teacher's Certificate from the Ontario College of Education.

Among a number of key roles in meteorology, Mr. Noble established forecast offices at St. Hubert and Halifax, was Meteorological Advisor to the Department of National Defence during World War Two and had a major role in the Meteorological Branch's development after the war.

Mr. Noble is Canada's permanent representative in the World Meteorological Organization, and is a member of its Executive Committee. In 1966 he was elected President of Regional Association Four (North and Central America).

**John Gratwick**, 47, Chairman, Canadian Transportation Development Agency, was previously Senior Technical Advisor to the Head of Express Services, Canadian National Railways.

He was co-chairman of the Department of Transport's Task Force on Objectives which preceded the reorganization, and a member of the Science Council study group on the applications of science to transportation.

Born in England, Mr. Gratwick graduated from London University, following which he served with the Royal Air Force and in Africa with the British Government. He came to Canada in 1957 and served with the RCAF as Deputy Director, Management Engineering before joining the CNR in 1960.

He is a fellow of the Royal Statistical Society and immediate past president of the Canadian Operational Research Society.

The Ministry's chief advisor on personnel matters is **W. F. (Bill) Nelson**, 45, Senior Ministry Executive, Personnel, Organization and Management Review. He was previously Director General, Personnel, in the Department of Transport.

M. Huck est expert comptable, diplômé de l'Université Queen; il possède également une expérience considérable dans plusieurs secteurs du gouvernement et a passé trois années dans l'industrie.

En 1945 il entrait à la Fonction publique à titre de contrôleur du Trésor avant d'être conseiller financier au ministère du Revenu national et au ministère de la Production de défense, puis sous-ministre adjoint.

M. Huck a travaillé auprès de nombreux comités internationaux et il est directeur de deux sociétés de la Couronne.

À titre de sous-ministre adjoint (finances), **M. I. C. Cornblat**, âgé de 56 ans, est le conseiller en chef du Ministère en matière de gestion financière.

M. Cornblat est un ancien vice-maréchal de l'Air qui a fait une brillante carrière dans l'A.R.C. de 1937 jusqu'à sa retraite en 1963; il était contrôleur de l'A.R.C. et membre du Conseil de l'Air. Après ses états de service militaires, il a occupé le poste de vice-président des opérations européennes de la Division Canadair de la *General Dynamics Corporation*. À son retour au Canada, il fut nommé adjoint au Président de la Société Canadair et au moment de sa nomination, il habitait Montréal.

**M. J. R. H. (Reg) Noble**, âgé de 58 ans, dirige le Service météorologique du Canada et il a été le chef du groupe d'étude pour la réorganisation du Ministère.

M. Noble a accédé au poste de Directeur de la Météorologie du ministère des Transports en 1964 et depuis 33 ans il travaille dans le domaine de la météorologie. Il détient un diplôme de maîtrise en physique (météorologie) de l'Université de Toronto et un diplôme d'enseignant de l'*Ontario College of Education*.

Parmi ses réalisations importantes au chapitre de la météorologie, M. Noble a établi des bureaux de prévision à Saint-Hubert et à Halifax, il a été conseiller en météorologie au ministère de la Défense nationale au cours de la Seconde Guerre mondiale et il a joué un rôle important dans le développement de la Direction de la Météorologie après la guerre.

M. Noble est le représentant permanent du Canada à l'Organisation mondiale de la Météorologie dont il est membre du Comité exécutif. En 1966 il fut élu président régional de l'Association no. 4 pour l'Amérique du Nord et l'Amérique Centrale.

**M. John Gratwick**, âgé de 47 ans, est le président du Centre canadien de développement des transports et il était auparavant conseiller technique principal auprès du chef des Services de messageries des Chemins de fer nationaux du Canada.

Il a été co-président du groupe d'étude des objectifs du ministère des Transports, lors de la réorganisation, et membre du groupe d'étude du Conseil des sciences sur les applications de la science aux transports.

M. Gratwick est né en Angleterre, diplômé de l'Université de Londres; il a servi dans la Royal Air Force et en Afrique pour le compte du gouvernement de la Grande-Bretagne. Arrivé au Canada en 1957, il a été sous-directeur des techniques de gestion de l'A.R.C. avant d'entrer au CN en 1960.

Il est membre honoraire de la Société royale de statistique et il était président de la Société canadienne de la recherche opérationnelle immédiatement avant le président actuel.

Le Conseiller en chef du Ministre pour les affaires du personnel, **M. W. F. (Bill) Nelson**, âgé de 45 ans, est le Chef exécutif du Ministère pour l'organisation du personnel et la révision de la gestion. Auparavant il occupait le poste de

A native of Toronto, he was an honours graduate and did post-graduate work in Social Psychology at Queen's University. He had several senior management positions with major Canadian firms. Following his first government position with the Public Service Commission, he was Director of Administration and Personnel in the Department of Finance and Treasury Board, later holding a similar appointment in the Department of Public Works. He joined the Department of Transport as Director General, Personnel in 1969.

**C. C. Halton**, 38, Senior Ministry Executive, Policy, Planning and Coordination, was formerly Director of Science and Technology with the Research Branch of the Canadian Transport Commission.

Born in Leeds, England, Mr. Halton holds a Master of Science degree in mathematics from London University, where he conducted major aerodynamics research projects in England and represented the Society of British Aerospace Contractors on the aerodynamic committee of the British Aeronautical Research Council from 1966 to 1969.

While with the Canadian Transport Commission, Mr. Halton was engaged in multi-modal studies concerned with the long range development of Canada's transport requirements on the so-called Canadian corridor from Quebec to Montreal to Toronto and Windsor between 1970 and 1990. The results of this study will form the basis for future investigations to be undertaken by the Transportation Development Agency.

Mr. Halton participated in the discussions which preceded the establishment of a Canadian Institute of Guided Ground Transport at Queen's University in Kingston, and has been responsible for defining the programs of research and development work on commodity pipelines which will be undertaken in collaboration by Saskatchewan and Alberta.

As chairman of the inter-departmental V/STOL and ACV committees, and as co-chairman of the federal task force, he has been giving active consideration to the future development of the Canadian Aerospace Manufacturing Industry.

Directeur général du personnel au ministère des Transports. Originaire de Toronto, M. Nelson a obtenu un diplôme avec mention en psychologie et il a fait des travaux post-universitaires en psychologie sociale à l'Université Queen. Il a de plus occupé plusieurs postes supérieurs en gestion auprès d'importantes sociétés canadiennes. Après son entrée à la Commission de la Fonction publique, il fut nommé Directeur de l'administration et du personnel au ministère des Finances, au Conseil du Trésor, et plus tard au ministère des Travaux publics. En 1969, il entra au ministère des Transports à titre de Directeur général du personnel.

**M. C. C. Halton**, âgé de 38 ans, chef exécutif du Ministère pour la planification et la coordination de la politique était auparavant le Directeur de la science et de la technologie à la Direction de la recherche de la Commission canadienne des transports.

Né à Leeds (Angleterre) et détenteur d'un diplôme de maîtrise ès sciences en mathématiques de l'Université de Londres, M. Halton a fait des recherches importantes en aérodynamique en Angleterre et il a représenté la *Society of British Aerospace Contractors* au Comité sur l'aérodynamique du *British Aeronautical Research Council* de 1966 à 1969.

Pendant qu'il était à la Commission canadienne des transports, M. Halton a poursuivi des études multi-modales concernant le développement à long terme des besoins du transport au Canada. L'étude comportait une enquête sur les besoins à venir pour le transport des passagers dans ce qu'il est convenu d'appeler le «corridor canadien» qui reliera Québec, Montréal, Toronto et Windsor entre les années 1970 et 1990. Les résultats de cette enquête constitueront les fondements d'enquêtes que le Centre de développement des transports entreprendra.

M. Halton a participé aux discussions qui ont précédé l'établissement du *Canadian Institute of Guided Ground Transport* à l'Université Queen de Kingston et il était chargé de définir les programmes de recherche et de mise au point pour les transports de produits par pipelines qui seront entrepris conjointement par la Saskatchewan et l'Alberta.

À titre de président des Comités inter-ministériels sur l'ADAC/V et les V.C.A. et en qualité de co-président de la Commission d'étude fédérale, il s'est occupé activement du développement de la Canadian Aerospace Manufacturing Industry.





ROUTE POUR LES AUTOBUS — Dessins par un artiste d'une route pour autobus adjacente à une autoroute. (Photo provenant de la General Motors Corp. Truck and Coach Division, Michigan).

BUS EXPRESSWAYS — Artist's conception of busway running alongside an expressway. (General Motors Corp. Truck and Coach Division, Michigan, picture)

# Improving public transportation

## Canada joins international task force on urban transport research

by *Ian Adam*, Transportation Engineer,  
Urban Transport Development Division,  
Transportation Policy and Research Branch.

The Ministry of Transport is currently participating in an extensive international urban transport research project, sponsored by the Organization for Economic Co-operation and Development (OECD). Ultimate aim of the research is to promote efficient use of road resources in our all-too-congested cities.

OECD was established in 1961 with the aim of promoting policies to contribute to economic expansion and international trade on a world-wide basis. Canada is one of 22 current member nations.

In July, 1968, the OECD Council decided to initiate a program of international co-operation in road research with the aim of ensuring the rational use of the research potential of member countries, the systematic exchange of knowledge and the pooling of the results of research.

Dr. Gordon D. Campbell, Director of Road and Motor Vehicle Traffic Safety in the Ministry, is Canada's representative on the Steering Committee for Road Research. He is responsible for co-ordination of Canada's efforts in the various research groups.

The committee has organized a number of these research groups, each responsible for a particular topic under the broad umbrella of road research. In 1970, contributions are being made by Canadians to research projects on the design of bridge decks, winter damage to roads, safety campaigns, junction accidents and optimization of urban bus operations.

### Urban bus services

The problems of bus operation are remarkably similar in cities around the world. The difficulties associated with rising costs, poor use of equipment and low speeds resulting from traffic congestion are not restricted to North America. OECD Research Group T3 was set up to focus on these problems, to appraise existing systems and techniques for upgrading bus operations. It will also set priorities for future co-operation to achieve (through the responsible national agencies) an

# Vers l'amélioration des transports publics

## Le Canada, membre de la Commission d'étude internationale sur la recherche en matière de transports urbains.

par *Ian Adam*, Ingénieur des transports  
Division de l'aménagement du transport urbain,  
Direction des méthodes et des recherches.

Le ministère des Transports participe actuellement à une vaste étude des transports urbains. Cette étude, accompagnée de recherche, est menée au niveau international sous l'égide de l'Organisation de coopération et de développement économique (OCDE). Le but ultime de cette recherche est de permettre une utilisation plus complète de nos ressources routières, dans nos villes asphyxiées par la circulation des véhicules.

L'OCDE a été fondée en 1961 dans le but de promouvoir à l'échelle mondiale des méthodes favorisant le développement économique et le commerce international. Le Canada est l'un des vingt-deux pays membres de cette organisation.

En juillet 1968, le Conseil de l'OCDE a résolu de lancer un programme de coopération internationale dans le domaine de la recherche routière, afin d'assurer l'utilisation rationnelle du potentiel de recherche des pays membres, l'échange systématique des connaissances et la mise en commun des résultats de cette recherche.

M. Gordon D. Campbell, chef de la Direction de la sécurité automobile et routière du Ministère, représente le Canada au Comité de direction pour la recherche routière. Il est chargé de coordonner l'action du Canada dans les différents groupes de recherche.

Le Comité a organisé un certain nombre de ces groupes de recherches, chaque groupe étant chargé d'un sujet déterminé à l'intérieur de la recherche en matière de routes. En 1970, la contribution des Canadiens est importante en ce qui concerne la conception des tabliers de ponts, les dégâts subis par les routes en hiver, les campagnes de sécurité, les accidents aux carrefours et l'amélioration des services d'auto-bus dans les villes.

### Services d'autobus urbains

Les problèmes que pose l'exploitation des services d'autobus sont très semblables dans les différentes villes du monde. Les difficultés dues à la hausse des prix, à l'utilisation inadéquate du matériel et à la lenteur de la circulation dans les villes encombrées n'existent pas seulement en Amérique du Nord. Le groupe de recherche T3 de l'OCDE a été mis sur pied pour définir ces problèmes et évaluer les systèmes et techniques existants afin d'améliorer les services d'autobus.





RTX BUS — New rapid transit bus developed by General Motors. (General Motors Corp. Truck and Coach Division, Michigan, picture)

AUTOBUS RTX — Nouvel autobus pour transport rapide, mis au point par la General Motors. (Photo provenant de la General Motors Corp. Truck and Coach Division, Michigan.)

overall improvement in public transport systems. Hopefully, this will lead to increased use of public transport in our congested cities.

The research group expects to review a wide variety of techniques aimed at improving the speed of bus travel and the accessibility to passengers — techniques that will both reduce costs and permit operators to provide better service to the public.

Canadians who will be applying their expertise and experience in the public transport field are Jack Sansom, Director of Planning for the Toronto Transit Commission, and Derek Scafton, Chief of Urban Transportation Development in the Ministry of Transport.

Many OECD member countries have been experimenting with methods to speed up existing bus systems, or introducing new alternatives, using exotic equipment. The wide geographic range of these experiments illustrates the need for increased international co-operation, in order to obtain the maximum benefit from individual experience.

#### Busways

A relatively simple, though expensive, way to improve public transit service is to separate the buses from the public street system through provision for special 'bus expressways' on private rights-of-way. These would operate in a manner

Il établira également les priorités à suivre pour qu'à l'avenir la coopération (par l'intermédiaire d'organismes nationaux) permette d'obtenir une amélioration générale des systèmes de transport en commun. Cette amélioration aura pour effet, on peut l'espérer, d'accroître le nombre des usagers des transports en commun dans nos villes encombrées.

Le groupe de recherche se propose d'examiner toute une gamme de procédés visant à améliorer la vitesse des autobus et la facilité d'accès des passagers, deux techniques qui réduiront les coûts et mettront les conducteurs à même d'améliorer leur service vis-à-vis du public.

Les Canadiens qui apporteront à ce groupe de recherche leurs connaissances techniques et leur expérience dans le domaine des transports en commun sont M. Jack Sansom, directeur de la planification pour la Toronto Transit Commission, et M. Derek Scafton, chef de la division de l'aménagement du transport urbain du ministère des Transports.

Bien des pays membres de l'OCDE ont essayé diverses méthodes visant à améliorer les systèmes d'autobus existants, ou apporter des solutions originales en ayant recours à un matériel nouveau. La vaste gamme géographique de ces expériences illustre bien le besoin qui se fait sentir d'accroître la collaboration internationale afin de tirer parti au maximum de l'expérience de chacun.

#### Voies réservées aux autobus

Une façon relativement simple, bien que coûteuse, d'améliorer le service de transport du public, consiste à séparer le trafic d'autobus de la circulation des autres véhicules en aménageant des «voies rapides pour autobus» à emprises

similar to the subway systems of Montreal or Toronto, but using buses instead of trains. Busways can be elevated, be in a tunnel, or, where land is available, built at ground level.

This technique has been proposed for several United States cities, including Atlanta and Milwaukee. It has the advantage of providing a very fast bus service without interference from other traffic. However, it involves a tremendous construction cost. In addition, once such a system is built, it cannot be easily changed, and, as with a rail system, the number of stations is limited.

A similar result can be obtained, without such a large investment, by reserving certain lanes on city streets for use of buses only. Usually this involves the curb lane, to provide convenient access for riders from the sidewalk. While separate lanes are cheaper to build than new bus expressways, they have the disadvantage of exposing the bus to normal traffic delays such as signals, turning vehicles, etc. Even so, experiments in France, for example in Paris and Marseilles, have demonstrated more than a 150 per cent increase in bus speeds through the use of exclusive bus lanes. In addition, by changing a few traffic signs and bus stops, alterations can easily be made to the system. No new construction is needed.

**Priority for buses**

Buses can be given priority or special privileges on the street system, for instance during rush hours, with a return to normal traffic operations at other times. Such a priority can be effected through use of special control signals or movable signs. It can be combined with exclusive bus lanes for even greater efficiencies.

The Netherlands has been carrying out experiments with traffic light priorities; other examples may be found in many North American cities. For instance, electrical contacts have been attached to streetcar wires in Toronto, so that the approach of a car signals a green light at the next intersection. In some other cities, buses are allowed to make turns or stops that are otherwise prohibited.

particulières. Ces voies rapides seraient conçues comme les voies des métros de Montréal et de Toronto, mais on y ferait circuler des autobus au lieu de trains. Les voies d'autobus peuvent être souterraines, surélevées ou, lorsqu'il y a suffisamment d'espace, au niveau du sol.

Cette technique a été proposée dans diverses villes des États-Unis, dont Atlanta et Milwaukee. Elle présente l'avantage de fournir un service d'autobus très rapide, sans gêner les autres moyens de circulation. Toutefois, elle implique un coût de construction extrêmement élevé. En outre, après la construction de ces voies, le système est difficile à changer et, comme pour le chemin de fer, il suppose un nombre limité de stations.

On peut obtenir des résultats semblables, avec des investissements moindres, en réservant une certaine largeur de la rue à l'usage exclusif des autobus. Habituellement, ceci suppose que le couloir ainsi formé jouxte le trottoir pour permettre aux piétons d'accéder facilement à l'autobus. Si le couloir représente un moindre coût d'aménagement que la construction d'une voie rapide, il a l'inconvénient de soumettre l'autobus aux contraintes courantes de la circulation, telles que les feux, les véhicules qui tournent, etc. Même dans ces conditions, les expériences faites en France, à Paris et à Marseilles par exemple, ont prouvé que la vitesse des autobus se trouvait augmentée de plus de 150% lorsque des couloirs leur étaient réservés. En outre, il suffit de changer quelques signaux et l'emplacement de quelques arrêts d'autobus pour apporter les modifications nécessaires au système. Il n'y a rien à construire.

**Priorité aux autobus**

On peut aussi donner aux autobus la priorité ou certains autres privilèges par rapport au reste du trafic de la rue, par exemple pendant les heures de pointe, avec retour aux règles normales de circulation aux autres moments. Cette priorité peut être mise en oeuvre en ayant recours à des



**FREEWAY BUS STOPS** — In Los Angeles freeway bus stops are often located in expressway interchange areas.

**ARRETS D'AUTOBUS CIRCULANT SUR LES VOIES RAPIDES** — A Los Angeles, les autobus qui circulent sur les voies rapides ont souvent leurs arrêts situés dans des aires de correspondance adjacentes aux autoroutes.



## Freeway operations

The systems described above would generally be most useful for speeding buses through the congested downtown areas of cities. Once out of the central core, it is possible for buses to run in mixed traffic on freeways in order to reach the residential suburbs. However, the pick up and set down of passengers along the freeway route becomes a major problem.

Obviously, then, the design and location of bus stopping areas on the freeway is critical; the bus must be able to enter the stop area freely, without interfering with other traffic. At the same time, the stop must be in a location that is convenient for the passenger.

Freeway bus stops in Los Angeles are often located in expressway interchange areas so that buses can use the interchange ramps as access to the stop. In addition, passengers have easy access to the cross street. A great deal of research effort is currently being directed to the problems of bus operations on freeways and these operations can be expected to increase in the future.

## New vehicles

Traditionally, buses seem to change very little. The North American transit coach, the British double-decker, and the articulated buses and trams of Europe, are of essentially standardized design. However, work is underway to develop new vehicles that would be more appropriate for bus service in the 'seventies.

For example, the 'RTX' (rapid transit experimental) bus being developed by General Motors offers several improvements over existing buses, and is well suited to busway or freeway service.

The RTX features a lower floor level, more comfortable seats, and better performance. It uses turbine engine, with greatly reduced exhaust pollution.

The City of San Francisco is purchasing a number of articulated trolleys that will run in a subway through the downtown area, then switch to surface streets in outlying areas. This system will have a capacity almost double that of the streetcars it replaces.

## Use of computers

Other specialists are working towards greater use of computers in bus operation and transit planning. The simplest approach is the use of the computer to co-ordinate different bus routes and calculate optimum schedules, taking account of bus costs, the time at which passengers wish to travel, and other factors. This is a task that ordinarily requires many hours of laborious pencil-work. However, it can be undertaken very quickly by computer, which can complete the calculations and print out the schedule in a form ready for publication.

More extensive plans have been made to use the computer to schedule a 'demand-bus' system. This bus would not follow a fixed schedule, but would detour as needed to pick up passengers at their door. Passengers would merely call a dispatcher for service; it is in effect a 'shared-taxi' system. It is hoped to use the demand bus technique in developing feeder systems to GO Transit commuter trains which provide service in the Toronto area.

## The final product

The current OECD research project hopes to analyse the experience and research knowledge obtained in the member countries, and to produce a final report that will maximize the value of this information for all member countries. It is hoped that this international approach to transit research will bring some critically needed improvements to urban bus

signaux spéciaux ou à des panneaux portatifs. Elle peut être combinée avec l'utilisation de couloirs exclusivement réservés aux autobus pour obtenir de meilleurs résultats.

Les Pays-Bas ont fait des expériences dans le domaine des priorités aux feux de circulation; on en retrouve des exemples dans plusieurs villes d'Amérique du Nord. Ainsi, à Toronto, des contacts électriques ont été installés sur les fils de tramway de sorte que l'approche d'un tramway déclenche le feu vert à l'intersection suivante. Dans certaines villes, les autobus sont autorisés à tourner ou à s'arrêter à des endroits interdits pour les autres véhicules.

## Autoroutes

Les systèmes décrits ci-dessus sont en général extrêmement utiles pour accélérer la circulation des autobus dans les centres encombrés des villes. Une fois sortis du coeur de la ville, les autobus peuvent emprunter des autoroutes pour desservir les banlieues résidentielles.

Toutefois, se pose alors avec acuité le problème de montée et descente des passagers de l'autobus. Il est bien évident que la conception et l'emplacement des arrêts d'autobus sur les autoroutes posent des problèmes délicats; l'autobus doit pouvoir entrer librement dans la zone d'arrêt sans gêner la circulation. En même temps, l'arrêt doit se trouver à un emplacement commode pour les passagers.

À Los Angeles, les arrêts d'autobus sur les autoroutes sont souvent situés sur les échangeurs des voies rapides de sorte que l'autobus peut utiliser la bretelle de l'autoroute pour accéder à l'arrêt, et que les voyageurs accèdent facilement aux rues transversales. On fait actuellement de nombreux travaux de recherche centrés sur le problème de l'exploitation des autobus sur les autoroutes. Ce système devrait connaître à l'avenir un essor.

## Nouveaux véhicules

Par tradition, les modèles d'autobus changent peu. L'autobus nord-américain, l'autobus anglais à deux étages, les autobus et tramways articulés de l'Europe sont essentiellement des modèles standardisés. Toutefois, l'on procède actuellement à des études pour mettre au point de nouveaux véhicules mieux à même de faire face aux besoins des années soixante-dix.

Par exemple, le RTX (autobus de transport rapide) mis au point par la General Motors offre diverses améliorations par rapport aux autobus existants et convient bien aux services d'autobus sur voies spéciales ou sur autoroutes. Le RTX a un plancher plus bas, des sièges plus confortables et de meilleures performances. Il utilise un moteur à turbine qui est moins polluant.

La ville de San Francisco achète un certain nombre de trolleybus articulés qui circuleront en sous-sol dans le centre de la ville puis emprunteront des rues en surface dans les zones périphériques. Ces trolleybus ont une capacité double de celle des tramways qu'ils remplacent.

## Les ordinateurs ne sont pas en reste

D'autres spécialistes se tournent vers une plus grande utilisation des ordinateurs pour l'exploitation des autobus et la planification des transports. La façon la plus simple d'employer l'ordinateur est de lui faire coordonner les différents itinéraires et calculer les horaires les mieux appropriés en tenant compte du prix de revient des autobus, de l'heure à laquelle les passagers souhaitent voyager et d'autres facteurs. C'est une tâche qui normalement nécessite de longues heures de grappe-papier et qui est effectuée très rapidement par l'ordinateur qui fait les calculs et imprime l'indicateur de façon à ce qu'il puisse être publié immédiatement.

Dans le cadre d'études plus vastes visant à établir un

systems throughout the world. The membership of the research group has been carefully balanced to achieve results, since it contains roughly equal representation from researchers, operators and administrators.

The final product of the group is expected to be a comprehensive report that sets out the results of experience and research in such a manner that service improvements and pilot projects can be easily implemented. It is hoped to avoid the traditional research publication format which, although it may contain much relevant information, is often in a form that is of only limited use to operators of bus systems.

The final report from each OECD research group is expected to be completed by the Spring of 1971. The end result of these reports, it is hoped, will allow more efficient and effective use of road resources in countries around the world.

système d'autobus «sur demande», l'ordinateur jouerait un rôle essentiel. L'autobus «sur demande» n'obéirait pas à un horaire fixe, mais ferait les crochets nécessaires pour prendre les passagers à leur porte. Les passagers n'auraient qu'à téléphoner pour obtenir le service, selon le système de «taxi partagé». On espère utiliser la technique d'autobus «sur demande» en développant les embranchements et voies secondaires reliant les trains de banlieue de la région de Toronto.

#### **But final**

Les travaux de recherche menés actuellement par l'OCDE visent à analyser l'expérience et les recherches accumulées par les pays membres, et de rédiger un rapport qui permettra à ces derniers de tirer profit au maximum de ces renseignements. On espère que cette recherche internationale dans le domaine des transports, contribuera à apporter les améliorations nécessaires aux systèmes d'autobus dans le monde. La composition du groupe de recherche a été mûrement étudiée et comporte une représentation égale de chercheurs, d'exploitants et d'administrateurs.

Le but final de ce groupe est de présenter un rapport détaillé et complet donnant les résultats de l'expérience et de la recherche de façon à implanter facilement les améliorations de service et les projets-pilotes. On pense éviter la présentation traditionnelle qui, bien qu'elle contienne beaucoup des renseignements précieux, est difficilement assimilable par les exploitants de lignes d'autobus.

Le rapport définitif de chaque groupe de recherche de l'OCDE doit être prêt au printemps 1971. Ces rapports, espère-t-on, permettront de faire un meilleur usage des ressources routières des pays du monde.

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## **Pledge co-operation in transport research**

Transport Minister Donald Jamieson, and the Secretary of Transportation, John A. Volpe, of the United States, jointly signed a Memorandum of Understanding in Ottawa, June 18. The memorandum called for closer co-operation between the United States Department of Transportation and the Canadian Ministry of Transport.

The aim of the understanding is to encourage co-operative research and development in order to solve transportation problems common to the two nations.

Identified in the memorandum as the initial subjects of mutual interest are: V/STOL (vertical and short take-off and landing) transportation demonstration and certification; high speed ground transportation in inter-city corridors; air traffic control and airways navigation equipment development; forecast of transportation requirements; transportation safety in all modes.

The operation of the St. Lawrence Seaway was also discussed. Increasing the scope of the joint research and development effort will be discussed at a future date.





## TRANSPORTATION BY LAND, SEA AND AIR

The Ministry of Transport is vitally concerned with all means of travel: aircraft, ships, trains, pipelines, automobiles, small boats, trucks and air cushion vehicles. In the reorganization, it is the aim of the Ministry to put into practice the theory that various kinds and modes of transport — land, air and marine — must work together. This is a new era in the transportation field. The Ministry plans to introduce concepts in such areas as research development, regulatory and operations.

## TRANSPORTS PAR TERRE, PAR MER ET PAR AIR

Le ministère des Transports s'intéresse fondamentalement à tous les moyens de transport: aéronefs, navires, trains, automobiles, petites embarcations, camions, véhicules à coussin d'air. L'objectif du ministère, au cours de la présente réorganisation, est de mettre en pratique la théorie suivant laquelle les divers moyens de transport — terre, air et eau — doivent travailler ensemble, et non pas séparément, à l'intérieur de cadres renouvelés. Nous sommes dans une ère nouvelle des transports. Le nouveau Ministère a l'intention de mettre en application des concepts d'administration et d'exploitation qui, ailleurs, sont d'ores et déjà des principes de gouvernement, mais ne le sont pas encore dans notre pays.

# TRANSPORT

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# CANADA





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Editor A. Victor Bushe

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Rédacteur français Jean-Louis Bibeau

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TOPS SERVICE—Earlier this year Transport Minister Don Jamieson announced the reduction of fees charged for technical stops for aircraft at Ottawa, Gander and Goose Bay airports—all near the heavily-travelled minimum-time track between the U.S. east and west coasts. Since the introduction of the Trans-Oceanic Plane Stop service (TOPS) many carriers on both sides of the Atlantic have paid tribute to the excellent reception and service their aircraft have been receiving at these airports. Picture on cover shows an imposing view of a huge Panam Boeing 747 on arrival at Gander, while inset (top) a Lloyd International 707 arrives at Ottawa, and (bottom) a Lufthansa 747 is serviced at Goose Bay.



SERVICE D'ESCALE POUR AVIONS TRANS-Océaniques—Au début de la présente année, le ministre des Transports, l'honorable Don Jamieson, a annoncé une réduction des droits exigés pour les escales techniques d'aéronef, aux aéroports d'Ottawa, de Gander et de Goose Bay, lesquels sont situés près de la route de durée minimale de vol entre les côtes est et ouest des États-Unis. Depuis la mise en œuvre de ce service d'escale pour avions trans-océaniques (TOPS), beaucoup de transporteurs des deux côtés de l'Atlantique ont rendu hommage à l'excellence de l'accueil et du service réservés à leurs avions, à ces aéroports. La photo sur la page frontispice montre une vue impressionnante d'un énorme Boeing 747 de la société PANAM, à son arrivée à Gander. Dans le médaillon supérieur, on peut voir un 707 de la Lloyd International arrivant à Ottawa; celui du bas représente un 747 de la Lufthansa qui est ravitaillé à Goose Bay.

# Transportation Council comment



# Memo du Conseil des transports

Huge waves give a mariner challenge. Riding as we are on the crest of reorganizing the Federal role and presence in the marine world poses the same challenge.

The new Federal marine community involves about 9,500 Canadians serving our country through foreign and domestic trade and national objectives. The Marine Services, the provision of commercial harbour facilities from coast to coast and Canada's vital participation in the St. Lawrence Seaway demands teamwork to maintain our country in the marine forefront.

As we embrace this modern day approach to marine management, without a blue print from any other country to follow, we expect to make the odd faux pas. It is our aim to keep these errors small and minimal in their effect. In this respect, a small organization group has been formed in the Canadian Marine Transportation Administration (CMTA) to make structural recommendations. In this context the challenges and job opportunities for those in the marine field will undoubtedly have greater horizons.

The CMTA organization group is composed of Mr. Tom Bryson of the National Harbours Board, Mr. T. J. Quigg of the St. Lawrence Seaway Authority, Mr. H. Buchanan of Marine Services and Mr. G. Stewart, my executive assistant. Other specialists may be added to this group.

As the marine community is now aware, the National Harbours Board will evolve into a National Ports Authority and regional ports authorities. We are looking forward to receiving comments from within the Ministry and throughout the shipping community with regards to this new approach and the overall restructuring of the Federal role and presence in the marine world.

C'est lorsque la mer est grosse que le marin peut donner toute sa mesure. Il en est de même pour nous qui voguons à la crête des vagues, occupés que nous sommes à établir la présence du gouvernement central partout dans les milieux de la marine et d'y réorganiser son rôle.

La marine fédérale est maintenant une communauté de quelque 9,500 Canadiens qui servent leurs pays dans le commerce maritime, chez nous et au delà des mers, ayant toujours à l'esprit nos objectifs nationaux.

Pour que notre pays garde son rang parmi les premières des nations maritimes, il est indispensable qu'un esprit d'équipe se manifeste dans les services de la Marine, chez ceux qui administrent nos installations portuaires sur nos deux côtes ainsi qu'à la section vitale de la Voie maritime du Saint-laurent qui traverse notre pays.

Alors que nous adoptons ce concept moderne de la direction des affaires maritimes, sans pouvoir, hélas, profiter de l'expérience d'autres pays en ce domaine, nous nous attendons, bien sûr, à commettre l'inévitable faux-pas.

Nous espérons que les erreurs, s'il en est, seront peu nombreuses et de peu de conséquence. Dans cet esprit, nous avons constitué, au sein de l'Administration des transports maritimes, un groupe d'études chargé de faire des propositions regardant la structure de l'organisation. Dans ce contexte, il n'est pas douteux qu'il y a de larges horizons et des possibilités d'emploi pour tous ceux qui veulent se mesurer avec les problèmes que soulèvent les questions maritimes.

Le groupe d'études se compose de M. Tom Bryson, du Conseil des Ports nationaux, de M. T. J. Quigg, de l'Administration de la Voie maritime du Saint-Laurent, de M. H. Buchanan, des Services de la Marine et de M. G. Stewart, mon adjoint exécutif. D'autres spécialistes pourront être appelés à faire partie de ce groupe.

La nouvelle en est maintenant connue dans les milieux de la Marine, le Conseil des Ports nationaux va disparaître pour faire place à une Direction des Ports nationaux et à des directions régionales des ports. Nous espérons recevoir d'un peu partout des commentaires, aussi bien des milieux ministériels que de la communauté des gens de mer, en ce qui concerne l'introduction de ces nouveaux concepts, l'établissement de la présence fédérale dans les milieux de la marine et la réorganisation de son rôle dans les mêmes milieux.

Administrator, Canadian Marine Transportation Administration.

PIERRE CAMU

L'administrateur des Transports maritimes.



## **Ministry introduces new era of high-speed weather data**

Canada's meteorological system earlier this year became the most modern weather information and forecast system in the world.

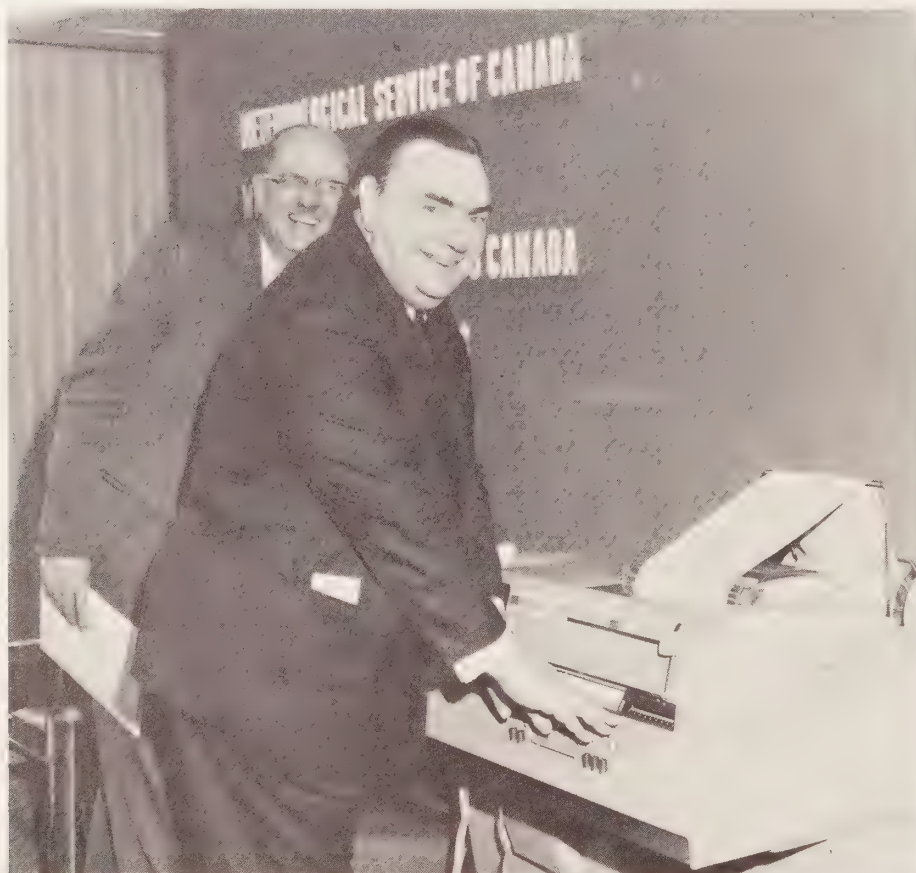
While an assembly of communications and transportation officials from both sides of the Canadian-U.S. border looked on, Transport Minister Don Jamieson pressed a switch at Toronto International Airport on May 8 that activated the Ministry of Transport's new Computerized Meteorological

communications system. This carries weather data from coast to coast and ushers in a new era of high-speed transmission of weather information to serve Canadians.

In introducing the system, the Minister sent out his own congratulatory message to stations throughout the network. Almost immediately, similar greetings were speeding in on the teletype as "weather men" all across the country joined the guests at

the ceremony, through the new high-speed facilities.

In his remarks preceding the actual inauguration of the system, Mr. Jamieson paid tribute to the ministerial communications planners and technical personnel, as well as to CN-CP telecommunications organization, for the contribution they had made in developing the new system.



AT THE PRESS OF A BUTTON—Transport Minister Don Jamieson seen after he had pressed the button to activate the new computerized meteorological communications system. Behind him is J. R. H. Noble, Administrator of the Meteorological Service

EN APPUYANT SUR UN BOUTON—Le ministre des Transports, l'hon. Don Jamieson, après avoir appuyé sur le bouton qui a mis en marche le nouveau système de communications météorologiques par ordinateur. On voit derrière lui M. J. R. H. Noble, administrateur des Services météorologiques

"Canada is the first country to have its national meteorological organization converted to a completely computerized communications system", he pointed out. "The Meteorological Service is the largest customer of a communications company, in terms of leased line, and yearly will move more pieces of data than any other organization in Canada".

He referred to the high speed data link connecting the Toronto weather computer system with computer equipment operated by the United States Weather Bureau in Washington.

"By means of this link, Canada receives all of the U.S. and foreign meteorological data required, and in turn delivers Canadian data".

Master of Ceremonies for the ceremony was J. R. H. Noble, Administrator of the Ministry's Meteorological Service, who briefly outlined the developments that had led to the setting up of the computerized system. He voiced appreciation of the fact that the platform guests included three representatives of organizations that had a direct interest in the operation of the system. These were R. H. Tarr, Vice-President, Telecommunications, Canadian National Railways; W. J. Stenason, Vice-President, Transport and Ships, Canadian Pacific, and Dr. Frederick G. Shuman, Director, National Meteorological Centre, Washington. Each of the three addressed the assembly briefly. Also on the platform was D. B. Kennedy, Director, Meteorology and Oceanography, Department of National Defence.

The Ministry's new meteorological teletype system is comprised of 13 collection circuits and 18 distribution circuits, operating at 100 words per minute and all terminating in the computer located at Canadian National Telecommunications headquarters in Toronto. Model 35 Teleprinter equipment is used throughout the system, operating in the 8-level ASCII (American Standard Code for Information Interchange). The network serves 402 civil and military offices and involves 600 separate connections and 36,985 miles of circuitry.

Except when it is engaged in transmission of a limited amount of data to the collection circuits, the computer polls these 13 circuits continuously in order to pick up data offered by the outstations. The 18 distribution circuits are fed only from the computer; consequently it is possible to load these circuits heavily and the bulk of data being switched by the computer is directed to the distribution circuits.

Input by the outstations on the collection circuits is possible only in response to the processor's poll. The processor switches all data immediately, on a "first in, first out" basis, according to a specified program. An exception to the "first in, first out" rule is the receipt by the processor of a Priority 1 piece of traffic, in which case the proces-



CN DATA CENTRAL—Seen here is a CN employee at work at the Data Central in Toronto, home of the Meteorological Services computer

CENTRALE DES DONNÉES DU NATIONAL CANADIEN—On voit ici un employé du National-Canadien à l'œuvre, à la centrale des données à Toronto, où se trouve situé l'ordinateur des Services météorologiques

sor places this message at the head of the outgoing queue.

The computer provides a rapid request-reply service for approximately 400 items of aviation forecast material. Upon request from an outstation for a forecast which it does not receive routinely, the Sub System Control centre at Meteorological Headquarters directs a message to the computer, which will result in the station receiving promptly the desired forecast, and also any amendments.

A high-speed data link, operating at approximately 3,000 words per minute, connects the computer in Toronto with a computer operated by the United States Weather Bureau in Washington. By means of this link, Canada receives all of the United States' and foreign meteorological data required. In turn Canada delivers to the United States all Canadian meteorological data required by the United States for use domestically, or for relay to international circuits.

## Ph.Ds in Meteorology

Two members of the Canadian Meteorological Service, Michael Kwizak and Paul Carlson were granted Ph.D. degrees by McGill University.

After graduation from University of Saskatchewan, Dr. Kwizak joined the Meteorological Service in 1949. For the past decade he has been Supervisor of the Operational Development and Evaluation Unit at the Central Analysis Office in Montreal. He has played a major role in the inception and development of numerical weather prediction in Canada and his doctoral studies were in this field.

Dr. Carlson joined the Meteorological Service in 1957. After working in forecast offices in Vancouver and Whitehorse, he moved to the Central Analysis Office in 1961 and to Ph.D. studies at McGill in 1965.



# Les données de la météo confiées à un ordinateur

Devant une réunion de spécialistes des télécommunications et du transport venus des deux côtés de la frontière canado-américaine, le ministre des Transports, l'honorable Don Jamieson, a appuyé sur un commutateur à l'aéroport international de Toronto, le 8 mai, pour mettre en service le nouveau système de télécommunications météorologiques par ordinateur du ministère des Transports. Ce réseau transmet des données météorologiques d'un océan à l'autre et marque le début d'une ère nouvelle caractérisée par la transmission à haute vitesse de renseignements météorologiques à l'usage des Canadiens.

En inaugurant ce réseau, le Ministre a transmis un message de félicitations à toutes les stations reliées à ce réseau. Immé-

diatement, des messages semblables ont été transmis par téléimprimeurs, alors que les météorologistes à travers tout le pays se sont joints aux invités à la cérémonie par l'intermédiaire des nouveaux services ultra-rapides pour marquer cette occasion spéciale.

Dans l'allocution qu'il a prononcée avant l'inauguration effective du réseau, M. Jamieson a rendu hommage aux planificateurs et au personnel technique responsables des télécommunications du Ministère, de même qu'aux services de télécommunications du National-Canadien et du Pacifique-Canadien, pour l'apport qu'ils avaient fait à la mise au point du nouveau système.

«Le Canada est le premier pays qui ait introduit un système de télécommunications entièrement commandé par ordinateurs dans son service de météorologie», a-t-il souligné. «Le Service météorologique est le plus important des clients d'une société de télécommunications pour ce qui est de la location des lignes, et chaque année, il transmettra plus de données que tout autre organisme au Canada».

Il a mentionné le chaînon pour transmission de données qui relie le système d'ordinateur du bureau météorologique de Toronto à l'installation d'ordinateur exploité par le *United States Weather Bureau*, à Washington.

«Au moyen de ce chaînon, le Canada reçoit toutes les données météorologiques américaines et étrangères dont il a besoin et, en retour, il transmet des données canadiennes».

L'animateur de la cérémonie fut M. J. R. H. Noble, qui est l'Administrateur de la direction de la météorologie du Ministère. Il a exposé brièvement les développements qui avaient précédé l'établissement de ce système commandé par ordinateurs. Il exprima sa satisfaction de voir parmi les invités d'honneur trois représentants d'organismes qui s'intéressent directement à l'exploitation du système, soit MM. R. H. Tarr, vice-président (télécommunications) des Chemins de fer nationaux du Canada; W. J. Stensson, vice-président (transport et navires) du Pacifique-Canadien, et le directeur du *National Meteorological Centre* de Washington, M. Frederick G. Shuman. A tour de rôle ces trois personnes ont prononcé une brève allocution. Le Directeur de la Météorologie et de l'Océanographie au ministère de la Défense nationale, M. D. B. Kennedy, se trouvait également parmi les invités d'honneur.

Le nouveau système de téléimprimeur de la Direction de la météorologie du Ministère comprend 13 circuits de rassemblement de données et 18 de distribution qui fonctionnent à la vitesse de 100 mots/minute et aboutissent tous à l'ordinateur de l'Administration centrale des télécommunications du National-Canadien à Toronto. Le téléimprimeur modèle 35 est utilisé dans tout le système, fonctionnant dans l'ASCII à 8 niveaux (*American Standard Code for Information Interchange*). Le réseau dessert



C'EST LE «COEUR»!—Commandé par ordinateur, le centre de ce système de communications météorologiques du ministère des Transports est logé à l'immeuble de l'Administration, Direction de la météorologie, 315 ouest, rue Bloor, Toronto. Nous voyons ici une partie de l'équipement qui «guide» et contrôle le système afin de s'assurer que le tout fonctionne correctement. Ce service météorologique a un personnel à son service 24 heures par jour

THE "HEART" OF COMMUNICATIONS—The Ministry's computerized meteorological communications system at the headquarters of the Ministry's Meteorological Service in Toronto. Seen here is the Sub-System Control Unit, which "polices" and monitors the automatic system to ensure proper operation. It is staffed 24 hours a day by Meteorological Service communicators

402 bureaux militaires et civils et comprend 600 connexions distinctes et 36.985 milles de circuit.

L'ordinateur qui commande le système de téléimprimeur est un Collins, troisième génération, modèle C8500.

Sauf lorsqu'il est occupé à transmettre un nombre limité de données aux circuits de rassemblement, l'ordinateur sonde ces 13 circuits continuellement pour trouver les données offertes par les stations éloignées. Les 18 circuits de distribution ne sont alimentés que par l'ordinateur; par conséquent, il est possible de charger lourdement ces circuits et la majorité des données sélectionnées par l'ordinateur sont aiguillées vers les circuits de distribution.

L'introduction de données par les stations éloignées sur les circuits de distribution ne peut se faire qu'en réponse au sondage de l'unité de traitement. L'unité de traitement aiguille toutes les données immédiatement, sur une base de «premier arrivé, premier servi», conformément à un programme précis. La réception par l'unité de traitement d'un message prioritaire constitue une exception à la règle du «premier arrivé,

premier servi». Dans ce cas, l'unité de traitement place ce message en tête des données de sortie.

L'ordinateur fournit un service rapide de réponse aux demandes pour environ 400 sortes de prévisions météorologiques destinées à l'aviation. A la demande d'une station éloignée qui désire une prévision qu'elle ne reçoit pas de façon courante, le sous-centre de contrôle du système à la Direction de la Météorologie envoie un message à l'ordinateur, si bien que la station reçoit promptement la prévision désirée et aussi toute modification nécessaire.

Un chaînon de transmission de données à haute vitesse, fonctionnant à environ 3.000 mots/minute, relie l'ordinateur de Toronto à un ordinateur exploité par le *United States Weather Bureau*, à Washington. Grâce à ce chaînon, le Canada reçoit toutes les données météorologiques nécessaires en provenance des États-Unis et d'autres pays. A son tour, le Canada envoie aux États-Unis toutes les données météorologiques canadiennes dont ont besoin les États-Unis pour usage local ou pour retransmission aux circuits internationaux.



M. J. R. H. Noble



YES, THEY DID IT!—Who says you can't get blood out of a stone. Well, here they've done it. Ray Stone, of the Ministry's Information Services is seen giving a blood donation at a clinic held by the Red Cross Volunteer Blood Donor Service at the Salvation Army Citadel.

BRAVO! RAY—On voit ici Ray Stone, de la Division de l'information du Ministère, donnant du sang lors d'une collecte de sang organisée par le Service de donneurs volontaires de la Croix-Rouge, à la citadelle de l'Armée du Salut.



## Reckless boating in the cause of safety

Hurling across the lake at 50 mph, the outboard cutter slammed into a U-turn and back again, showing most of her bottom through the boiling spray as she headed for the next hairpin turn.

It was all in the interests of safety.

Canada's Ministry of Transport, together with the pleasure boating trade associations of Canada and the United States, were conducting the first joint international boat trials this summer at Picton, Ontario in the Bay of Quinte's famous vacation region.

The trials help refine calculations of safe power limits for various boats. All pleasure boats rated for 10 h.p. or more and under 16 feet in length, registered in Canada, are required to carry a plate recommending maximum power and load capacity, and the United States has expressed interest in the Canadian system.

"The best motor in the world is of little use if it is too powerful for the boat," says Warren Bonn, Ministry of Transport naval architect in charge of the program. "I've seen overpowered boats somersault right out of the water, and motors snap their brackets. Yet, with motors only slightly less powerful, the same boats behaved ideally."

The week-long program included tests of some 40 craft ranging from 12-foot cartoppers to 20-foot inboard day cruisers. Professional drivers took them at top speed through a series of extreme manoeuvres. Speed and stability of the boats, powered by motors of different sizes, were checked by instruments and experienced observers. Speeds reached ranged from 20 to 60 miles per hour. Specially designed equipment was used to measure and record their operational characteristics during the violent manoeuvres.

The Canadian Coast Guard cutter CCGS *Spindrift* stood by for safety reasons and supplied logistic support for setting up and maintaining the buoyed courses.

The evaluation team of more than 40 experts in the field included officials of Canada's Ministry of Transport and Department of Industry, Trade and Commerce; the Allied Boating Association of Canada, the Boating Industry Association



PREPARING TEST COURSE—Warren Bonn, right, Ministry architect, and Bob Beale of the Canadian Boating Association, set up test course with the aid of a diver

CAP D'ESSAI—Warren Bonn, architecte du Ministère, à droite, et Bob Beale, de la Canadian Boating Association, établissant le cap d'essai, avec l'aide d'un plongeur

of the United States, and the United States Coast Guard. Some had travelled from as far away as Texas and Florida.

The Ministry of Transport's Steamship Inspection Service has conducted similar all-Canadian tests since 1957, using them as the basis of maximum horsepower recommendations affixed to every Canadian pleasure craft rated for 10hp or more. This is the first year of official participation for the United States.

Too much power can cause instability without an appreciable increase in speed, Warren Bonn has observed.

"One manufacturer, some time ago, was enthusiastic about his specially designed boat and insisted that it be rated higher

than our 65 horsepower recommendation," he recalls.

"We tried it out with the 85 horsepower he demanded and it became quite unsteady on the straight course, going all out at 35 mph. On the stability course, it actually flipped with the builder's driver at the wheel. It was late fall and he found Lake Ontario mighty cold.

"When he and the boat were well dried, we suggested he try it out with the recommended motor and he agreed. With a 65 hp motor, the boat took the stability course beautifully. On the straightaway, she held steady while going flat out at 33 mph—20 fewer horsepower, yet only 2 mph slower and a safer, smoother ride."

## Pilotage Division appointments

Three members of the Ministry's Pilotage Division were appointed recently to new posts.

Cmdr. H. R. Beck, 52, of Ottawa, former Pilotage Training and Standards Officer, has been appointed Superintendent of Pilotage Operations at Ottawa headquarters.

Capt. J. J. Brooks, 45, former District Supervisor of Pilots at Cornwall, Ont., has been named Regional Superintendent of Pilots, Great Lakes.

Capt. V. R. Covington, 52, former District Supervisor of Pilots at Vancouver, has been appointed Regional Superintendent of Pilotage, Western Region.

Mr. Beck served 27 years in the Royal Canadian Navy, from which he retired as Commander before joining the Ministry of Transport in 1967 as Pilotage Training and Standards Officer. The father of four children, he resides with his family in Ottawa.

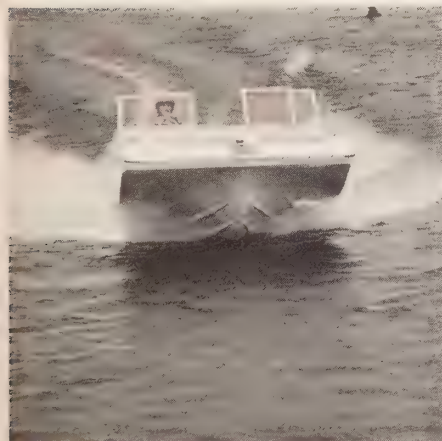
Mr. Brooks joined the Ministry in 1967 as District Supervisor of Pilots, Kingston, after having served 25 years with the Royal Canadian Navy, from which he retired as Lieutenant-Commander. On taking up his new duties, Mr. Brooks, who has four children, will reside in Ottawa with his family.

Mr. Covington is a veteran of service with the Merchant Marine and later was employed ashore by Sperry Gyroscope Company prior to joining the Ministry of Transport in 1961 as District Supervisor of Pilots at Vancouver. The father of two daughters, he resides in Vancouver with his family.



**LAYING ANCHORS**—Captain John McDonald, right, master of the CCGS *Spindrift*, assists a Canadian Coast Guard diver in laying anchors for test courses

**POSE D'ANCRER**—Le capitaine John McDonald, à droite, qui commande le n.g.c.c. SPINDRIFT aide un plongeur de la Garde côtière à poser des ancrés en vue de l'établissement du cap d'essai



**SPEED TEST**—Boat being tested at full throttle in the straightaway



**TURNING AT SPEED**—A professional driver takes a hairpin turn at top speed on the stability course

**ESSAI DE VITESSE**—Bâtiment en train d'être essayé à la vitesse maximale en ligne droite

**VIRAGE EN «ÉPINGLE À CHEVEUX»**—Un conducteur professionnel prenant un virage en «épin-gle à cheveux» à pleine vitesse, pendant l'essai de stabilité

## Ships' safety service

The safety service for ships operating on the west coast of Vancouver Island has been improved by the implementation on July 15, 1970 of radiotelephone broadcasts of weather and dangers to navigation from the Spring Island Loran Station.

## Honoured at Film Festival

"Ports Canada" was judged to be the best film at the Chicago International Industrial Film Festival, receiving the Gold Camera Award.

The Festival, held in Chicago April 30, attracted an entry of 400 films from 15 different countries.



# Operation oil in Nova Scotia

The wreck of the 11,000-ton tanker *Arrow* in Chedabucto Bay, N.S. last February posed enormous problems. A total of 1,500,000 gallons of her 3,800,000-gallon cargo of heavy Bunker C oil had spread throughout the large bay, coating tourist beaches, rocks and fishermen's jetties.

"We were well out in front of the world store-house of knowledge; we had to rely on our own ingenuity, inventiveness and experience", said Dr. Patrick McTaggart-Cowan, head of the three-man task force appointed by Transport Minister Don Jamieson to clean up the oil and look after attendant problems.

The task force leadership consisted of Dr. McTaggart-Cowan, Executive Director of the Science Council of Canada, Dr. Harry Sheffer, vice-chairman of the Defence Research Board, and Navy Captain Michael Martin.

Previous oil spills have occurred in warmer weather. In the cold winter sea the Bunker C did not react as it would have done if warmer.

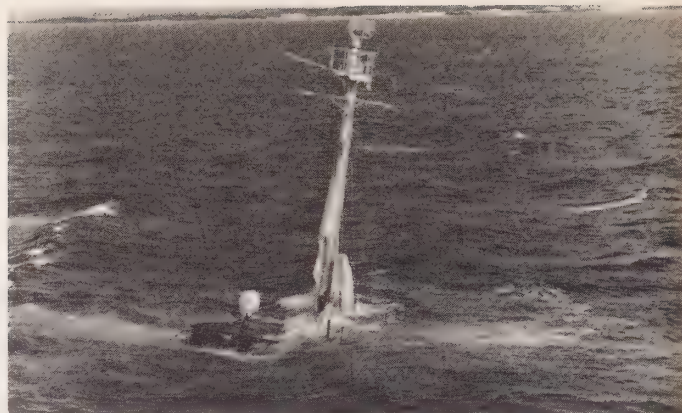
Since the task force began operations many government officials, industrial representatives and specialists have visited the area and have been impressed by the work done by the task force under almost impossible conditions. And the Canadian Armed Forces, the Department of Fisheries, other federal agencies and private corporations joined Transport's efforts.

Dr. Sheffer, who headed the science side of the task force, said that considerable scientific advice and research was provided by some 100 scientists whose assistance was co-ordinated by Dr. William Ford of the Bedford Institute of Oceanography.

A surprising number of students also sent him suggestions, some of which were "pretty inventive". The task force tested numerous proposals: attempting to burn the oil, setting up booms, and other techniques. A novel invention, the "slick licker", proved extremely effective. This oil slick conveyor belt was invented by Richard Sewell of the Defence Research Establishment, Pacific.

Most of the short-term problems have been handled, but the area will be under scientific surveillance for some years to come.

A formal public investigation into the grounding and subsequent sinking of the *Arrow* was opened in Halifax by Mr. Justice Gordon, L. S. Hart of the Supreme Court of Nova Scotia.



ITS OWN MARKER—Mast of Liberian-registered tanker *Arrow*, which sank in Chedabucto Bay, N.S., February 4

SA PROPRE BALISE—Le mât du pétrolier *Arrow*, immatriculé au Liberia, qui a fait naufrage dans la baie de Chedabucto, en Nouvelle-Écosse, le 4 février dernier



SALVAGE EXPERT—Captain Sven Madsen, Imperial Oil salvage master aboard the barge *Irving Whale*, watches the Bunker "C" as it flows from sunken tanker

SPÉCIALISTE EN SAUVETAGE—Le capitaine Sven Madsen, spécialiste en sauvetage de l'Imperial Oil, à bord de la péniche *Irving Whale*, surveille le mazout provenant du pétrolier naufragé



THE SLICK-LICKER—R. B. H. (Dick) Sewell, inventor of the slick-licker, watches as his invention picks up gobs of goop

LE «SLICK-LICKER»—M. R. B. H. (Dick) Sewell, inventeur du «slick-licker», tapis roulant pour enlever des nappes d'huile, surveille son invention à l'œuvre



# Lutte au mazout en Nouvelle-Écosse



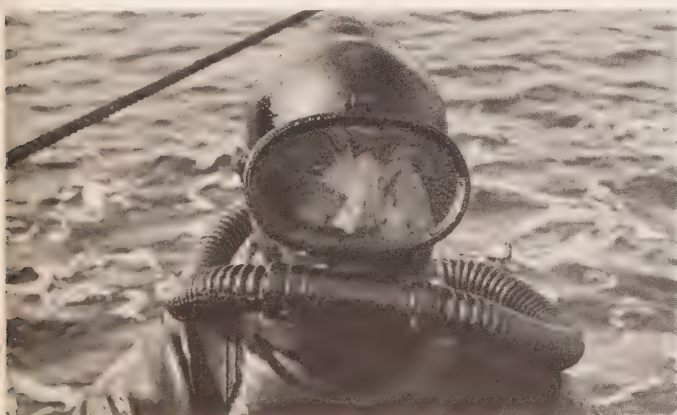
**WHAT A PLACE!**—Here two Forces personnel repair a motor in an assault boat being used to transport brush for oil boom.

**QUEL ENDROIT!**—On voit ici deux militaires en train de réparer le moteur d'une embarcation d'assaut utilisée pour transporter des fascines destinées à la construction d'une estacade pour empêcher la pollution par le mazout



**FOAM EXPERIMENT**—Among experiments to clean the oil-soaked beaches was the spraying of foam on beach at Creighton Island Causeway

**EXPÉRIENCE PORTANT SUR LA MOUSSE**—Afin de nettoyer les plages imbibées de mazout, on a tenté de nombreuses expériences et, notamment, une expérience qui consistait à pulvériser de la mousse sur la plage de la chaussée de l'île Creighton



**NAVAL DIVERS**—LSCD Rene Young, covered with oil emerges at wreck of Arrow, where he and companion divers were engaged in the oil recovery operation

**SCAPHANDRIERS DE LA MARINE**—LSCD René Young, ruisselant de mazout, revient à la surface près de l'épave de l'Arrow où lui-même et ses compagnons s'occupent de la récupération du pétrole

Le naufrage du pétrolier ARROW en février dernier jaugeant 11,000 tonnes dans la baie de Chedabucto, (N.-É.), a posé des problèmes énormes. Près d'un million et demi de gallons de sa cargaison de 3.8 millions de gallons de mazout épais du type "Bunker C" se sont répandus dans l'eau, noircissant la baie, les plages touristiques du rivage, les rochers et les jetées de pêcheurs.

«Ce désastre nous a permis d'acquérir des connaissances totalement inédites et, pour les acquérir, nous ne pouvions compter que sur notre ingéniosité, notre imagination et notre expérience», a déclaré à ce propos M. Patrick McTaggart-Cowan, docteur ès sciences, qui dirige l'équipe de trois spécialistes chargés par le ministre des Transports, l'honorable Don Jamieson, de débarrasser la mer du pétrole répandu et de résoudre tous les problèmes connexes.

M. McTaggart-Cowan est directeur exécutif du Conseil des sciences du Canada. Il est entouré, dans la tâche de nettoyage confiée à son équipe, par M. Harry Sheffer, docteur ès sciences, vice-président du Conseil de recherches pour la défense, et du capitaine Michael Martin, de la Marine.

Il est vrai que d'autres «marées noires» se sont produites ailleurs dans le monde, mais c'était dans des eaux plus chaudes. Le mazout «Bunker C» ne se comporte pas dans un climat froid d'hiver comme il le fait si le thermomètre indique une température plus élevée.

Depuis que le groupe spécial a commencé ses travaux, bien des fonctionnaires du gouvernement, des représentants de l'industrie et des spécialistes ont visité la région et ont été impressionnés par le travail qu'a effectué le groupe spécial dans des conditions pratiquement impossibles. Les Forces armées du Canada, le ministère des Pêches, d'autres organismes fédéraux et des sociétés privées ont uni leurs efforts à ceux du ministère des Transports.

M. Sheffer, qui dirigeait la partie scientifique des travaux du groupe spécial a déclaré que ces scientifiques, une centaine environ, dont l'action était coordonnée par M. William Ford, de l'Institut d'océanographie de Bedford, avaient formulé des conseils et effectué des recherches, d'une importance considérable.

Un nombre surprenant d'étudiants a également envoyé des suggestions dont certaines faisaient preuve d'esprits singulièrement inventifs. Le groupe spécial a fait des essais à la suite de différentes propositions: brûler le pétrole, installer des estacades, et essayer d'autres techniques. Une invention originale, le tapis roulant «slick lick» s'est révélé extrêmement efficace. Ce convoyeur qui ramasse le pétrole a été inventé par Richard Sewell, de l'établissement de la recherche à la Défense (Pacifique).

La plupart des problèmes à court terme ont été résolus, mais cette région fera l'objet d'une surveillance scientifique au cours des prochaines années.

Une enquête publique officielle au sujet de l'échouement et de l'engloutissement du navire ARROW a été ouverte à Halifax par M. le juge Gordon L. S. Hart, de la Cour supérieure de la Nouvelle-Écosse.





FROM THE CHIEF—Dr. McTaggart-Cowan gives a briefing aboard the Canadian Coast Guard vessel *Narwhal*

C'EST LE CHEF QUI PARLE—M. McTaggart-Cowan donne des directives à bord du navire de la Garde côtière canadienne le *Narwhal*

HOLDING BACK THE OIL—Forces personnel construct boom on Janvrin Island beach for placing at mouth of lagoon

TENTATIVE POUR CONTENIR LE MAZOUT—Les membres des forces armées construisent, sur la plage de l'île Janvrin, une estacade qui sera placée à l'embouchure du lagon



DISPERSANT TESTS—Troops spray rocks with sea water following dispersant tests west of Archat

ESSAIS D'AGENTS DE DISPERSION—Les troupes pulvérisent d'eau de mer les rochers à la suite d'essais d'agents de dispersion à l'ouest d'Archat.



**TASK FORCE**—Three of the men who were actively engaged in "Operation Oil". From left, Dr. Patrick McTaggart-Cowan, task force commander Captain M. A. (Mike) Martin, military commander, and Dr Harry Sheffer, Defence Research Board, who headed the science side of the task force

**GROUPE SPÉCIAL**—Trois des hommes qui ont pris une part active à l'opération pour empêcher la pollution par le mazout. De gauche à droite, M. Patrick McTaggart-Cowan, chef du groupe spécial; le capitaine M. A. (Mike) Martin, commandant militaire, et M. Harry Sheffer, du Conseil de recherches pour la défense, qui dirigeaient les scientifiques membres du groupe spécial



**BY THE SHOVELFUL**—Canadian forces personnel from Gagetown pick up oil with shovels and rakes at Archat Harbour, prior to bagging it on landing craft

**À LA PELLETÉE**—Les membres des forces canadiennes du camp de Gagetown recueillent le mazout au moyen de pelles et de râteliers au port d'Archat, avant de le mettre dans des récipients sur la péniche de débarquement

**ANOTHER ATTEMPT**—An oilevator was one of the pieces of equipment tested to draw up the oil goop. Here is one in operation at River Inhabitants

**UNE AUTRE TENTATIVE**—Un «oilevator» (genre de tapis convoyeur) comptait parmi les pièces d'outillage essayées afin d'enlever les grumeaux de mazout. En voici un à l'œuvre dans la rivière Inhabitants





## Ship reporting scheme performing vital service

by G. T. Meek,  
Port Meteorological Officer,  
Ontario Region

The Canadian Meteorological Service is best known in the present day as the provider of public and aviation weather forecasts. It is not so well known that its inception was mainly due to a need to provide a service to mariners. This was the reason, not only for Canada's meteorological service coming into being, but also for those of the great maritime nations of the nineteenth century, namely France and England.

The French and the British lost more than 40 vessels in the land-locked harbour at Balaclava in 1854 with a great loss of life, before they formed meteorological services. Both the United States and Canada were forced to do likewise as a result of marine disasters on the Great Lakes.

Records of shipwrecks on the Lakes show that hardly a year has passed since 1814 without at least one or two fatalities and often many more. For instance in the big storm of November 11, 1913, 40 ships were wrecked with a loss of 235 lives. However, in many cases, men were lost for reasons other than weather. Fire and ship collisions were responsible for many fatalities, ac-

cording to the records, and many more just disappeared, cause unknown.

It can safely be assumed that many of the fatalities of the early days were due to the lack of regulations governing the Rules of the Road, certification of officers and the lack of load lines governing the amount of cargo which could be safely carried. Even with the rigid regulations of the present day, scarcely a year goes by without a ship fatality on the Lakes.

### Visual storm warning

President Grant of the United States passed a Bill in 1870 establishing a Weather Service, and a Visual Storm Warning network was inaugurated. The first storm warning was hoisted in November 1870. Canada's service was created in 1871, but it was not until 1873 that the first Visual Storm Warning Signal, comprising ball and cone symbols, was raised in Canadian waters. Such services on the east and west coasts did not begin until the 1890's.

With the opening up of the country came the expansion of the electromagnetic telegraph system, and this was as big a boon



An anemometer adorns the foremast of a lakes vessel

Un anémomètre orne le mât de misaine d'un navire des Lacs

to the meteorologist of that era as the development of the weather satellite is to the present-day forecaster. It was then possible to expand the network of weather observing stations and collect much more information for use in preparing marine forecasts.

It was also possible to send telegrams to the Harbour Authorities at the various ports around the Lakes to notify them of the expected weather conditions in order that they might hoist the appropriate visual signals for shipping in the area.

The great storm of November 1913, mentioned earlier, plus an earlier storm in 1905, was the reason behind the forming of yet another service to the mariner, namely the introduction of a network of Marine Radio Stations. The original network comprised seven stations, which were all founded between 1913-1914 and are all still in operation, either on their original sites or within close proximity.

The coming of radio did much to improve the meteorological services to shipping, as it meant that ships no longer had to hug the shore line in order to observe the visual warning signals. They could now receive weather reports out of the sight of land and take whatever evasive action might be necessary to avoid predicted storms.

Visual storm warnings were officially discontinued in Canada in 1953, but they are still a common sight on the American side of the lakes, where their hoisting is a duty of the Coast Guard.

Up until 1950 both the U.S.A. and Canada relied heavily upon lighthouses around the Lakes for weather observations. It had become evident that in order to give detailed forecasts to the mariner, it was necessary to have vessels take and transmit weather reports. Also, because of the vast area of water (96,000 square miles), the densely populated areas to the east of the Lakes required reports from floating observation platforms.

In order to obtain a better coverage of the Lakes, more lighthouses were recruited until at present there are nine Canadian and some 30 American stations reporting weather. Shipping companies were approached at this time and requested to direct their vessels to report the weather.

### Training of officers

In 1950, Upper Lakes Steamships of Toronto agreed to permit three of their vessels to take part in a program of weather observing and reporting. Basic meteorological instrumentation, including wind measuring equipment, was installed aboard the S.S. *John Ericsson*, S.S. *Shirley G. Taylor* and the S. S. *John S. Pillsbury*. The ships' officers were then trained in the methods of observing, coding and transmitting of the reports.

Since then, the observing fleet has expanded to a fleet of some 55 ships, with all of the major shipping companies co-



PREPARING FOR STORMS—Don Hall, Meteorological Inspector, Ontario Region, services the equipment aboard a Lakes vessel in preparation for seasonal observations

ON SE PRÉPARE POUR FAIRE FACE AUX TEMPÊTES—M. Don Hall, inspecteur météorologiste de la région de l'Ontario, assure l'entretien de l'équipement à bord des navires des lacs en guise de préparatifs pour les observations saisonnières

operating in the program. These firms include Upper Lakes Steamships, Canadian Steamship Lines, Carry Ore Steamships, Hall Corporation, Yankcanuck Steamships, the Canadian Coast Guard, survey vessels of the Department of Energy, Mines and Resources and the Ontario Water Resources Commission.

A similar Lake ship reporting scheme is operated by the United States Weather Bureau and they have some 45 vessels making reports. The weather reports from both American and Canadian vessels are in a uniform code and the reports are sent to the forecast offices of both countries. They are also re-transmitted via Lorain, Ohio, together with the lighthouse reports to all ships in the form of a Lake Weather Bulletin (LAWEB).

The servicing and supervising of the weather observing program aboard the vessels is the responsibility of the Port Meteorological Officers at Toronto and Montreal, who also take care of the needs of foreign vessels visiting their ports and which in their turn, are engaged in a similar program on the oceans.

The officers aboard these vessels are performing a valuable function in furthering our knowledge of the weather which affects the Great Lakes. This is of vital importance in developing this area of North America which contains such a large proportion of our industry and population. The data being collected is being used for a wide variety of studies in such fields as watershed research, ship construction and water pollution control.

The ships of Canada's inland weather fleet bear no special insignia except for their anemometer for measuring the wind. It is usually displayed atop the foremast. Nor is there additional payment to the ships' personnel involved in the weather program. Despite all the modern technology of our age, weather is still the number one enemy of the seafarer and he is very much aware of the fact that without his assistance in providing weather reports, the weather forecaster can give him no warning of approaching storms.

## University students visit airport

At the request of the University of North Dakota, a one-day program on airport management, including operations and maintenance, was prepared by the management and staff of Winnipeg International Airport for 25 students majoring in aviation administration. A tour of facilities was arranged and discussions were conducted with the co-operation of the airport manager and staff, including participation by personnel from the Meteorological, Telecommunications and Air Traffic Control Branches.

The University of North Dakota is one of the few colleges or universities in North America offering a program leading to a degree in aviation administration. The one-day program was very successful and the officials of the University of North Dakota have indicated their desire to include future visits as part of their curriculum.



# La flotte d'observation météorologique des Grands Lacs joue un rôle vital

par M. G. T. Meek  
Agent météorologiste de port  
Région de l'Ontario

Le Service de météorologie du Canada est mieux connu de nos jours comme le fournisseur de prévisions météorologiques destinées au public et à l'aviation. Le fait qu'il a été établi principalement pour répondre aux besoins des navigateurs est moins connu. C'est pourtant là la raison de la mise sur pied, non seulement du Service de météorologie du Canada, mais de ceux des grandes nations maritimes du dix-neuvième siècle, notamment la France et l'Angleterre.

Fait assez ironique à noter, une grande tragédie semble toujours précéder l'organisation de services publics, en particulier lorsque ces services ont pour but la sauvegarde de la vie. La France et l'Angleterre n'ont formé leurs services météorologiques qu'après avoir perdu plus de quarante navires, et de nombreuses vies, dans le port intérieur de Balaclava en 1854. Les États-Unis et le Canada ont été forcés de faire de même par suite de nombreuses tragédies maritimes sur les Grands Lacs.

Les dossiers des naufrages sur les Grands Lacs indiquent que, depuis 1814, il y a eu presque chaque année au moins une ou deux pertes de vie, et parfois beaucoup plus. La grande tempête du 11 novembre 1913, par exemple, a causé le naufrage de quarante navires et 235 pertes de vie. Dans plusieurs cas, toutefois, des hommes sont disparus pour des raisons autres que le temps. Les dossiers indiquent que les incendies et les abordages de navires ont été la cause de nombreux sinistres, et plusieurs personnes sont simplement disparues sans explication connue. Nous pouvons affirmer sans risque de faire erreur que de nombreuses pertes de vie, au début, ont été causées par l'absence de règles de route, le manque de compétence des officiers et l'absence de lignes de charge régissant le volume des cargaisons qui pouvaient être transportées sans danger. Malgré la réglementation sévère de nos jours, il se passe rarement une année sans qu'il y ait un naufrage sur les lacs.

## Avis de tempête visuels

Le président Grant des États-Unis a fait adopter en 1870 une loi qui établissait un service météorologique, et un réseau d'avis de tempête visuels a été inauguré par la suite; le premier signal d'avis de tempête a été hissé en novembre 1870. Le service du Canada a été créé en 1871, mais ce n'est qu'en 1873 que le premier signal visuel d'avis de tempête, formé des symboles boule et cône, a été hissé dans les eaux canadiennes. Ce service n'a commencé sur les côtes est et ouest que vers 1890.

Le développement du pays a entraîné l'expansion du réseau de télégraphe électromagnétique qui représenta une amélioration aussi importante pour le météorologiste de cette époque que le perfectionnement du satellite météorologique pour le prévisionniste moderne. Le réseau de stations d'observation météorologique a à son tour pu être étendu et il est devenu possible de recueillir beaucoup plus de renseignements pour la préparation de prévisions destinées à la navigation maritime. Il est aussi devenu possible d'envoyer des télégrammes aux administrations des divers ports des Lacs, afin de leur signaler les conditions météorologiques prévues, de façon qu'ils puissent hisser les signaux visuels appropriés pour les navigateurs de la région.

La grande tempête de novembre 1913, mentionnée ci-dessus, ainsi qu'une tempête antérieure en 1905, ont provoqué la création d'un autre service aux navigateurs, soit la formation d'un réseau de stations radiomaritimes. Le réseau original était composé de sept stations, toutes établies entre 1913 et 1914 et encore sur les ondes, soit à leur emplacement original ou tout près. La venue de la radio a grandement amélioré les services météorologiques à la navigation maritime, puisqu'elle a dispensé les navires d'avoir à longer les côtes pour observer les signaux d'avertissement visuels. Ils pouvaient dorénavant recevoir des messages météorologiques sans voir la côte et prendre les mesures nécessaires pour éviter les tempêtes prévues. Les avis de tempête visuels ont officiellement cessé au Canada en 1953.

(suite à la page 21)



LONG SERVICE—*The Canadian Century* in the Welland Canal. This is one of the many Upper-Lakes Steamship Lines vessels which have given long service in the weather observing program

LONGS ÉTATS DE SERVICE—*Le Navire Canadian Century* dans le canal de Welland. Il s'agit de l'un des nombreux navires des lignes de navires de l'amont des Lacs qui participent depuis longtemps au programme d'observation du temps



R. J. Douglas Brown



**OEUVRE DE PIONNIER**—On voit ici avec l'homme de l'année dans le domaine des Transports, de gauche à droite: le capitaine J. L. Cuthbert, surintendant régional de la flotte, le capitaine Paul Fournier; M. R. J. Tingley, directeur régional de la commercialisation, région atlantique, Chemins de fer nationaux du Canada, M. F. M. Weston, directeur régional des services de la marine, région des Maritimes et M. E. O. Ormsby, gestionnaire de district, base de la marine de Dartmouth

**PIONEERING CONTRIBUTION**—Seen with the Transportation Man of the Year Award, from left Capt. J. L. Cuthbert, Regional Fleet Superintendent; Capt. Paul Fournier, R. J. Tingley, Regional Manager Marketing, Atlantic Region, CNR; F. M. Weston, RDMS, Maritimes; E. O. Ormsby, District Manager, Dartmouth Marine Base

## Dual honours in field of purchasing

R. J. Douglas Brown, A/Chief of Purchasing and Contracts, has received dual honours in connection with his work with the Ministry of Transport. He has been designated as a Certified Public Purchasing Officer by the National Institute of Governmental Purchasing, Inc., and has been awarded the Professional Purchaser Diploma by the Purchasing Management Association of Canada.

The National Institute award is the highest certificate of professionalism in purchasing recognized by the Public Service Commission. It is the result of successful completion of years of study and oral examination.

In receiving the Professional Purchaser Diploma, Mr. Brown joins the ranks of 130 Diploma graduates in Canada. This award, too, was achieved through years of study, attending seminars and an oral examination.

## L'HOMME DE L'ANNÉE DANS LE MONDE DU TRANSPORT

Le capitaine Paul Fournier qui, cette année, a été décoré de l'Ordre du Canada, a reçu une nouvelle distinction lorsque le comité de la Semaine nationale du Transport l'a déclaré «l'Homme de l'année» dans le monde du transport.

Cet honneur récompensait les services rendus par le capitaine Fournier l'an dernier, lors du voyage, qui a fait époque, du pétrolier américain *Manhattan*.

Le comité a remis la plaque au capitaine Adrien Gallant qui la recevait au nom du capitaine Fournier, tombé gravement malade d'un ulcère perforé de l'estomac alors qu'il commandait le n.g.c.c. *Louis S. St. Laurent*, dernier-né des brise-glaces qui accompagnait le *Manhattan* lors de son deuxième voyage dans les eaux de l'Arctique.

L'année précédente, alors que le navire américain effectuait son premier voyage, le capitaine Fournier commandait le brise-glaces n.g.c.c. *John A. Macdonald*.

M. Stanley B. Haas, de la *Humble Oil and Refining Company*, à Houston (Texas) a envoyé, au nom des officiers et des membres de l'équipage du *Manhattan*, une carte de «prompt rétablissement» au capitaine Fournier où il disait: «Il y a trop peu de gens qui connaissent l'Arctique aussi bien que vous pour que nous puissions nous passer plus longtemps de vos connaissances techniques dans ce domaine, aussi notre grand désir serait de voir se terminer au plus tôt votre convalescence et vous voir revenir parmi nous.»

Disant que le *Louis S. St. Laurent* s'acquittait très bien de sa mission durant le deuxième voyage du *Manhattan*, M. Haas a ajouté: «Le *John A. Macdonald* et son courageux capitaine qui ne recule devant rien seront toujours présents à la mémoire des gens qui ont participé aux opérations expérimentales de l'Arctique.»



## Appointed Rector In Anglican Church

A man who joined the Department of Transport in 1937, served with distinction in World War Two and became chief of the Department's Nautical and Pilotage Division in 1954, has been appointed Rector of the Parish of Winchester and Cherterville, near Ottawa, in the Anglican Church of Canada.

The man, Rev. Frederick S. Slocombe, retired from the Department of Transport in 1967 and entered Trinity College, University of Toronto. On graduation he entered Holy Trinity Church, Pembroke, Ontario, and was ordained a priest in 1969.



Rev. F. S. Slocombe

Born in Cardiff, Wales, Mr. Slocombe started work at 14 in the office of ship-brokers. In 1919, he went to sea, obtaining his foreign-going master's certificate by the time he was 25 years of age.

In 1930 he came to Canada, where he started sailing on the Great Lakes. He spent six winters teaching nautical subjects at the Owen Sound Collegiate in Owen Sound, Ont.

Mr. Slocombe joined the department as examiner of masters and mates at Toronto in 1937 after he had risen to become first mate aboard the SS *Manitou*.

During World War Two, he took command of the Canadian Government ship *Montcalm* on the Halifax-Murmansk route, which was heavily attacked by enemy submarines. For his services he was invested a Member of the British Empire by the Earl of Athlone, then Canada's Governor General.

## Memories of Weather Station "Papa"

A man who had packed many nautical miles and a wealth of experience behind him since he joined the British merchant service as a cadet when he was 14, has retired from the Ministry of Transport.

The man, Captain James Sleight, Regional Marine Superintendent, Western, had been based in Victoria since 1964. After a distinguished war service, and service as a master in a Canadian merchant service vessel which operated between ports in the Far East and England, he joined the Department of Transport in 1950.

His first command in Department service was of the converted frigate *St. Catherines*, which he took from Halifax through the Panama Canal to Esquimalt. In 1950, the CCGS *St. Catherines*, under the command of Capt. Sleight, and the CCGS *Stonetown*, under the command of Captain McMunage, were the first vessels to man weather station "Papa", which is the only ocean weather station manned and maintained by Canada.

When in command of the weathership *St. Catherines*, Capt. Sleight found that Station "Papa" was located in the "world's worst storm centre". Many a time his little vessel was buffeted by tremendous seas and Jim's seamanship was responsible on several occasions for the safe return of the vessel to port, cracked, but not broken.

Capt. Sleight was selected to take the *Simon Fraser* from Victoria to Halifax in 1963, and on return to Victoria he rejoined the *St. Catherines*. He went ashore in 1964 as the West Coast's first Area Marine Superintendent, and during his tenure as Regional Marine Superintendent the new Coast Guard Weatherships *Vancouver* and *Quadra* came into service. His quiet perseverance and attention to minute details substantially helped to overcome the many shake-down problems encountered on these vessels.

A retirement presentation was held for Capt. Sleight in the Victoria offices and at this his many associates bid he and Mrs. Sleight farewell as they left to take up residence in Mrs. Sleight's native province of Nova Scotia.

## Transportation Man of the Year

Captain Paul Fournier, who earlier this year was honoured by membership in the Order of Canada, received further distinction when he was named Transportation Man of the Year by the committee of National Transportation Week.

These honours were in recognition of the part played by Capt. Fournier in last year's epoch-making trip of the U.S. tanker *Manhattan* in Arctic waters.

The award of Transportation Man of the Year was accepted from the committee by Capt. Adrienne Gallant, Marine Operations Branch, on behalf of Capt. Fournier, who was taken seriously ill while the Coast Guard's newest and most up-to-date icebreaker, the CCGS *Louis S. St. Laurent*, of which he was in command, was accompanying the *Manhattan* on her second voyage into Arctic waters.

The formal presentation of the award was made at a luncheon of the Traffic Club in Montreal during Canada's first National Transportation Week, at which Transport Minister Don Jamieson was guest speaker.

Last year Capt. Fournier was in command of the icebreaker CCGS *John A. Macdonald* when it accompanied the U.S. vessel on its first Arctic voyage.

In a "get well" message to Capt. Fournier during his illness, Stanley B. Haas, of Humble Oil and Refining Company, Houston, Texas, on behalf of the officers and crew of the *Manhattan*, wrote: "Arctic advocates like yourself are too few to spare you from your field of special knowledge for too long a period, so we urge upon you the period of relaxation and recuperation necessary for you to come charging up here again soon."

Saying that the *Louis S. St. Laurent*, was performing magnificently on the second voyage of the *Manhattan*, Mr. Haas added: "The *John A. Macdonald* and her determined and unstoppable skipper of last Fall will always occupy a special niche in the hearts and minds of those of us involved in the *Manhattan* Arctic test operations."

# Open house at Electronics Systems Training Centre



**DÉPUTY MINISTER MEETS THE STUDENTS**—Deputy Transport Minister O. G. Stoner, third from left, standing, meets some of the students at the Ministry's new Electronic Systems Training Centre at Carp, Ont. during "Open House" at the Centre. In the photo, from left, standing: Instructor Roy Connibear, Faculty Manager O. E. Brown, Mr. Stoner, J. Thibeault, Senior Assistant Deputy Minister George Scott and T. G. MacTavish.

**LE SOUS-MINISTRE RENCONTRE LES ÉTUDIANTS**—Le sous-ministre des Transports, M. O. G. Stoner (debout, 3e en partant de la gauche) rencontre quelques étudiants au nouveau Centre de formation sur les systèmes électroniques à Carp, alors que le Centre est ouvert au public. Sur l'illustration, debout, en partant de la gauche, on aperçoit: l'instructeur Roy Connibear, le directeur des professeurs M. O. E. Brown, M. Stoner, M. J. Thibeault, le premier sous-ministre adjoint M. George Scott et M. T. G. MacTavish.



**STUDENTS IN THE "VOR" BUILDING**—These students on course at the Air Services School Electronic Systems Training Centre are gaining first-hand knowledge of the Very High Frequency Omni-Range (VOR) equipment at Carp Airport. Classroom facilities are in close proximity to installed electronic equipment such as ILS, radar and VOR

**LES ÉTUDIANTS AU BÂTIMENT DU «VOR»**—Ces étudiants, qui suivent un cours au Centre de formation (Systèmes électroniques) de l'école des Services de l'Air acquièrent à la source des connaissances relatives aux radiophares omnidirectionnels (VOR) à l'aéroport de Carp. Les classes sont aménagées à proximité du matériel électronique. ILS, radar et VOR



**GETTING THE INSIDE STORY**—Transport Ministry electronics technicians are well prepared for their jobs in the maintenance and operation of radio aids to air and marine navigation when they complete their advanced training courses at the Electronic Systems Training Centre. In this photo, Instructor Roy Connibear is seen lecturing to a class

**UN COUP D'OEIL À L'INTÉRIEUR**—Lorsque les techniciens en électronique du ministère des Transports ont terminé leur cours de perfectionnement, ils savent comment faire fonctionner et entretenir l'équipement de radioguidage pour la navigation aérienne et maritime. Sur cette illustration, l'instructeur Roy Connibear est en train de donner un cours à des étudiants



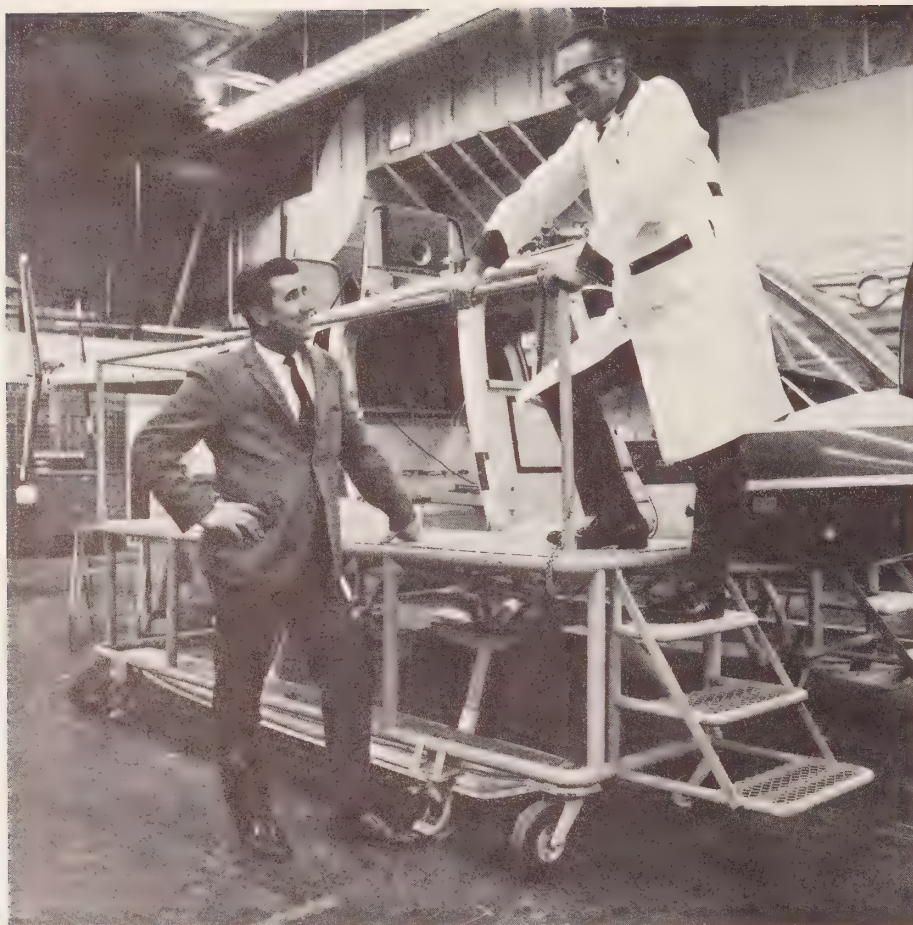
**CROWDS CAME TO CALL**—Educationists in the field of electronics training, municipal officials from Huntley Township and many Ministry of Transport employees from the Telecommunications and Electronics Branch saw the many types of specialized equipment used in advanced training of electronics technicians. At the centre, background, are Newton Douglas, Senior Instructor, F. H. Pickel and Don Bishop

**NOMBRE IMPRESSIONNANT DE VISITEURS**—Des spécialistes en matière d'enseignement électronique, des fonctionnaires municipaux du township de Huntley et plusieurs employés de la Direction des Télécommunications et de l'Électronique au ministère des Transports, ont vu les divers types d'équipements spécialisés utilisés pour la formation des techniciens en électronique. Au centre, à l'arrière-plan, on aperçoit MM. Newton Douglas, F. H. Pickel, instructeur principal, et Don Bishop

(Ministry of Transport photos)

(Photos du ministère des Transports)





HELICOPTER MAINTENANCE—Peter John Casey of Ottawa (right) and his supervisor, George Grubb, have a look at the maintenance stand which won Mr. Casey a \$470 award

ENTRETIEN DES HÉLICOPTÈRES—M. Peter John Casey d'Ottawa (à droite) et son surveillant, M. George Grubb, examinent le support pour l'entretien des hélicoptères qui a mérité à M. Casey une prime de \$470

## Keep up the stream of new ideas

All people have a tremendous need to feel worth while and important, and for most men and women work satisfies this need by providing a daily situation where they can demonstrate their talents, reap rewards of recognition and acquire feelings of status and prestige.

In this dynamically changing field of transportation, it is more necessary than ever before for us all to have a constant stream of new ideas and techniques if we are to maintain this progress. Each employee of the Ministry of Transport is a specialist at his or her job, and management is counting on all to continue to find ever better ways of doing their special tasks—streamlining and improving the overall operations of the Ministry.

In order to implement improvements, employees have the opportunity of submitting their suggestions for approval under the Suggestion Award Program. So keep sending in your suggestions and give management a chance of implementing them!

For designing maintenance stands for the Bell Helicopter 206-A Jet Ranger, Peter John Casey, Ottawa, has been awarded \$470. This maintenance stand allows savings in man hours and promotes increased overall safety during maintenance operations.

### Other awards:

Orval A. Ralph, Ottawa—\$20 award—Canal forms for recording precipitation, water levels and flows.

K. D. Bryen, Beaverton, Ont.—\$50 award—Improvement to Canals system navigation light equipment (protection of locking pin solenoid with housing).

C. W. Purchase, Bonavista, Nfld.—\$100 award—Protection of packaged batteries with non-conducting material to avoid fire dangers.

Kenneth A. Maynard, Prince Rupert, B.C.—\$30 award—Reduction in number of forms on pad and gumming on bottom and left side rather than on top only.

William E. Power, Stephenville, Nfld.—\$40 award—Three-wind speed scales on same ruler

David S. McMillan, Bull Harbour, B.C.—\$20 and \$30 awards—Recording of messages sent and received by Marine radio operators and keeping of about 15 days' tape.

Sydney J. Sillet, Vancouver—\$15 award—Inclusion of Cape Lazo local marine weather in Vancouver Marine/Aeradio weather broadcasts.

Mrs. Ann Rosemary Bradshaw, Sherwood Park, Alta.—\$50 award—Improved chart for input of data to computer.

Thomas I. Yamashita, Pierrefonds, P.Q.—\$170 award—Removal of Air Canada teletype circuit at Montreal airport as it was not serving any useful purpose.

Walter Hogg, Bramalea, Ont.—\$50 award—Reflective paint and rotating amber beacon for supply trucks using aircraft movement areas.

John H. DeRoche, Antigonish, N.A.—\$45 award—Improved switching unit for transmitting station.

Philip G. Aber, Montreal—\$20 award—Installation of wind direction and speed read-out equipment at Montreal Weather Office.

Richard A. Cutly, Kenora, Ont.—\$20 award—Hand-out cards for airports—would cut costly searches through phone calls or messages.

Bruce B. Waine, Uclucnot, B.C.—\$20 award—Expansion of aviation weather broadcasts from Tofino and Nanaimo Aeradio Stations.

William F. Egan, Arnprior, Ont., and Clifford J. Stevenson, Richmond, Ont.—\$25 award each—Combination hand hold and step for Bell 206A Helicopters.

William A. McCreath, Ottawa—\$60 award—"Puller" tool designed for removal of fan drive assembly on Bell 47 Helicopter.

Donald B. Rogers, Moncton, N.B.—\$50 award—Modification to install one telephone post and two insulated binding posts at rear of Phillips Communication Console.

William F. Joyce, Ottawa—\$30 award—Standard form for recording summaries of important telephone calls or visits.

Terry R. Macham, Chemanius, B.C.—\$40 award—Modification of computer program of wind finding radar.

Norman D. Toy, Ottawa—\$40 award—Special tool for alignment of Tacan simulators ARM-502.

John R. Docherty and Gary Myers, Lander, B.C.—\$25 award each—Proposal for amendment of Maintenance Standards Manual for VHF Omnitest equipment.

Douglas S. Walker, Fruitland, Ont.—\$50 award—Modification of Cossor 7520C transmitter for safety and protection of personnel.

George M. Martin, Rockland, Ont.—\$15 award—Putting rubber pads on bottom of ladders instead of metal spikes to eliminate damage to floors.

Richard Robb, St. Boniface, Man.—\$30 award—Proposal for standard Document Transit and Receipt Form.

### **Suggestions provide returns in \$\$\$**

The average incentive award paid to Ministry of Transport employees jumped from \$48 in fiscal year 1968-69 to \$70 in 1969-70, an increase of nearly 50 per cent. In all, 100 employees received cash awards for suggestions that resulted in savings to the Ministry of Transport of \$117,000.

Jusqu'à 1950, les Etats-Unis et le Canada se fiaient beaucoup aux stations de phares sur les bords des lacs pour les observations météorologiques. Il était devenu évident qu'afin de fournir des prévisions détaillées aux navigateurs, il fallait que les navires reçoivent et transmettent des messages d'observations météorologiques. De plus, à cause de l'immense étendue d'eau (96.000 milles carrés), les centres de population dense à l'est des lacs devaient recevoir des messages de plate-formes d'observation flottantes. Afin d'observer les lacs de façon plus efficace, d'autres stations de phares ont été établies, de sorte qu'à présent 9 stations canadiennes et quelque 30 stations américaines font des observations météorologiques. On demanda aussi aux compagnies maritimes de faire transmettre des messages météorologiques par leurs navires.

L'entretien et la surveillance du programme d'observation météorologique à bord des navires incombent aux agents météorologistes de port de Toronto et de Montréal, qui s'occupent aussi des besoins des navires étrangers qui visitent leurs ports et qui participent à un programme semblable sur les océans.

Les officiers de ces navires accomplissent un travail important en augmentant notre connaissance du temps sur les Grands Lacs. Cette connaissance est d'une importance vitale pour le développement de cette région de l'Amérique du Nord qui renferme une si grande partie de nos industries et de notre population. Mes données recueillies servent à une grande variété d'études dans des domaines comme la recherche sur les bassins hydrographiques, la construction de navires et le contrôle de la pollution de l'eau.

Les navires de la flotte météorologique intérieure du Canada n'arborent aucun insigne particulier, sauf que leur anémomètre pour mesurer le vent est normalement fixé au haut du mât de misaine. Le personnel de navire qui participe au programme d'observation météorologique n'en retire aucun gain monétaire. Malgré toutes les techniques modernes de notre époque, le temps demeure l'ennemi principal du navigateur qui sait très bien que sans l'aide qu'il apporte au prévisionniste par la transmission de rapports météorologiques, ce dernier ne peut l'avertir des tempêtes imminentes.





**LONG SERVICE**—Staff and friends of the Central Analysis Office, Montreal Airport, held a dinner and dance on October 19th. Here Mr. W. B. B. Whittington on his retirement after 31 years' service and Mrs. G. B. B. on completion of 25 years' service in the Meteorological Branch. The photos show Mr. and Mrs. Whittington, left, and Mr. and Mrs. G. B. B.

**LIÈGES BIEN REMPLIS**—Collègues et amis du Bureau central d'analyses de l'Aéroport de Montréal se sont réunis à la salle Châteaurand du Hôtel Baymont pour un banquet ayant lieu en l'honneur des 31 ans de service de M. W. B. B. Whittington et des 25 ans de service de M. John J. G. B. B. Directeur de la météorologie du tout deux prennent leur retraite. Les photos montrent M. et Mrs. Whittington à gauche et M. et Mrs. G. B. B.

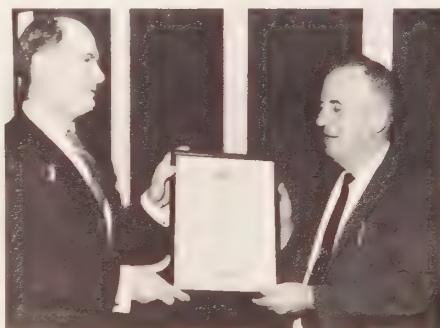


**LONG SERVICE IN SYDNEY**—Miss Ruth MacMillan, stenographer in the Sydney Pilotage Office, retired recently after 27 years' service. Capt. J. P. Parker, District Supervisor of Pilots at Sydney, retired after 20 years' service. Both Miss MacMillan and Capt. Parker were honoured by friends and co-workers. Here Claude Huntley, left, Pilotage Administration Officer, St. John, N.B., is seen presenting gifts to them.

## W. C. Hopkins

W. C. (Hoppy) Hopkins, Regional Supervisor of Electronic Installations for the Telecommunications and Electronics Branch of the Ministry of Transport, retired in Moncton, N.B. after more than 41 years of government service.

He joined the Department of Marine and Fisheries on September 16, 1928 as a Radio Operator on the CGS *Cartier*. In November 1939, after the Air Services Branch of the Department of Transport was formed, he was appointed as the Electronics Technician in charge of the installation and maintenance of all electronic equipment east of Ottawa. In 1961 the position of Regional Supervisor of Electronic Installations was created and Mr. Hopkins became the first incumbent.



**RECEIVES SCROLL**—Mr. Hopkins was honoured at a dinner and dance party at the Moncton Beauport Club. Here he receives an illuminated scroll signed by Deputy Minister O. G. B. B. B. presented by M. B. B. B. Regional Director of Air Services for the Atlantic Region.

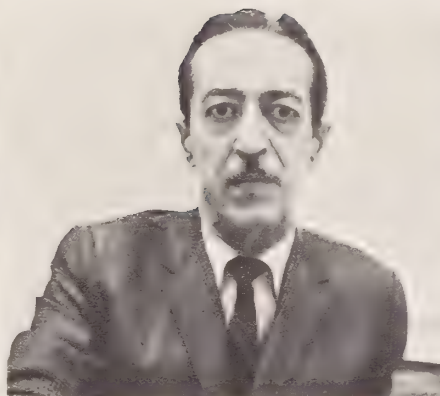
## Other retirements

C. F. Alltree, Vancouver—11 years;  
F. A. W. Book, London, Ont.—7 years;  
A. Boudreault, l'Anse St-Jean, P.Q., 9 years;  
B.A. Byers, Sault Ste-Marie, Ont.—10 years;  
J. Campbell, Sydney, N.S.—23 years;  
H. R. Carter, St. John's, Nfld.—48 years;  
R. B. Collings, Dartmouth, N.S.—40 years;  
W. J. Costello, Ferryland (Southern Shore), Nfld.—38½ years;  
R. B. Cumming, Weston, Ont.—13 years;  
Cyril Davies, Moncton, N.B.—31 years;  
Capt. R. A. Doucette, Church Point, N.S.—22 years;  
L. C. Evans, Victoria, B.C.—4½ years;  
J. H. S. Fletcher, Vancouver, B.C.—15 years;



**FORTY YEARS' SERVICE**—Many friends of "Buzz" Butler, RCTE at Toronto, gathered in Toronto to honor him at a testimonial dinner upon his retirement after more than 40 years of government service. During his service he held many responsible positions and in 1963 was promoted to the position of Civil Air and Communications Attache and Resident Member of the Commonwealth Telecommunications Board in London, England, for three years. Here H. J. Williamson, right, Director of Telecommunications and Electronics Branch in Ottawa, presents an illuminated scroll to Mr. Butler.

**UNE CARRIÈRE REMPLIE**—Au cours d'une soirée l'été dernier, plusieurs amis de "Buzz" Butler de la RCTE de Toronto, se réunissaient dans cette même ville pour lui offrir un dîner d'honneur à l'occasion de sa retraite après quarante ans au service de la Fonction publique. Il occupa plusieurs postes importants au cours de sa carrière. En 1963, il fut promu pour 3 ans au rang d'Attaché de l'aviation civile et des communications et de membre résident du Commonwealth Telecommunications Board à Londres, Angleterre. À droite sur la photo, le directeur des Télécommunications et de l'Électronique, M. J. H. Williamson, offre un manuscrit enluminé à M. Butler.



M. Jacques Melanson

## 41 ans de service à la Section de pilotage

Après 41 ans de service ininterrompu au sein de la Section de pilotage, le Surveillant régional des pilotes, M. Jacques Melanson, a pris sa retraite. Ses collègues lui firent leurs adieux au cours d'une réception tenue en son honneur.

M. Melanson entra dans la Fonction publique le 18 mars 1929. Il travailla d'abord comme commis et, après de pénibles efforts et de nombreuses luttes contre les difficultés de la vie, fit si bien son chemin à la Section de pilotage qu'il se retrouva surveillant régional.

## 41 years with Pilotage Section

Jacques Melanson, who was District Supervisor of Pilots for the Cornwall Pilotage District, Marine regulations Branch, has retired from the Ministry after 41 years of continuous service with the Pilotage Section. He was given a farewell at a reception held by his colleagues.

Mr. Melanson entered government service on March 18, 1929, as a clerk and worked his way up the ladder of the Pilotage Section to the position of District Supervisor.



**SERVED ON ESTEVAN**—With the exception of the five years he served with the RCN in World War Two, George S. Almond served from 1925 until 1955 on the CCGS Estevan. He retired from D.O.S.S. in January but is still considered an employee of M.O.T. Here M. E. Sagrion, right, District Manager, Victoria Marine Agency, presents Mr. Almond with a gift from his many friends and co-workers in Victoria.

**UN ANCIEN MARIN**—À l'exception de ses cinq années de services avec la Marine royale du Canada pendant la Seconde guerre mondiale, M. George S. Almond a servi à bord du navire CCGS Estevan de 1925 à 1955. Il a pris sa retraite du D.O.S.S. le 26 janvier dernier, mais est toujours considéré comme un fonctionnaire du Ministère des Transports. À droite sur la photo, le Gerant de district de l'Agence de la marine de Victoria, M. E. Sagrion, offre à M. Almond un cadeau de la part de ses nombreux amis et collègues de Victoria.

R. Fortier, Chambly, P.Q.—21 years;

J. P. Francis, Peterborough, Ont.—23 years;

J. Gagnon, Ste-Foy, Quebec, P.Q.—13 years;

F. W. Goulet, Sault Ste-Marie, Ont.—13 years;

E. R. Hagelin, Tofino, B.C.—16 years;

Eldor Hever, Nanaimo, B.C.—5 years;

F. E. Hughes, North Bay, Ont.—15 years;

E. J. Humphrey, Thamesford, Ont.—24 years;

H. A. Hunt, Ottawa, Ont.—17 years;

Mrs. Marion Kathleen Kelly, Ottawa, Ont.—13 years;

W. A. Knowles, Yarmouth, N.S.—18 years;

A. Lachance, Québec, P.Q.—21 years;

C. A. Landry, Natashquan, Saguenay, P.Q.—21 years;

Jean Latremouille, Quebec Agency—23 years;

E. A. Lavoie, Pointe-au-Père, Co. Rimouski, P.Q.—15 years;



# Transport ALBUM des Transports



When you see this structure, one of 54 such buildings across Canada, you are looking at a standard VOR Omni Range station. These stations form the backbone of the Canadian airways system by providing guidance for aircraft. With this system an instrument panel in an aircraft shows its direction from the station for distances up to 150 miles, depending on how high the plane is flying. Known as Visual Omni Ranges, these stations operate on frequencies between 112 and 118 MHz.

Le bâtiment illustré, l'une des 54 installations semblables disséminées un peu partout au Canada, est un radiophare omnidirectionnel VHF, ou VOR dans le langage aéronautique. Ces installations sont d'une importance capitale pour le système canadien des voies aériennes puisqu'elles permettent l'orientation précise des aéronefs. Lorsque le radiophare fonctionne, le pilote d'un aéronef muni de l'équipement de réception nécessaire peut voir sur son tableau de bord la direction qu'il suit par rapport à l'émetteur, à une distance pouvant aller jusqu'à 150 milles de celui-ci, selon l'altitude de l'appareil. Les stations de radiophares fonctionnent sur des fréquences de 112 à 118 MHz.

761



NOVEMBER-DECEMBER  
1970  
NOVEMBRE-DECEMBRE



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Editor A. Victor Bushe

THE QUEEN'S PRINTER, OTTAWA, 1970

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Rédacteur français Jean-Louis Bibeau

L'IMPRIMEUR DE LA REINE, OTTAWA, 1970



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The front cover of this Christmas issue of "Transport" is the work of 18-year-old Saskia Meuffels, a student at St. Joseph's High School in Ottawa. Miss Meuffels was employed during the summer holidays in the graphic arts section of the Ministry's Central Publishing Division.

La couverture de ce numéro de Noël de *Transport Canada* est l'œuvre de Saskia Meuffels, étudiante de 18 ans à l'école secondaire St-Joseph d'Ottawa. Mlle Meuffels a travaillé au cours de ses dernières vacances d'été à la section des publications et des arts graphiques du Ministère.

## Challenge of greater accomplishments



## Le défi de grandes réalisations

I would like to take this opportunity to express my sincere gratitude to each of you in the Ministry of Transport for your loyalty and conscientious performance of duties during this vital period of reorganization. Your dedication and know-how have made 1970 an important benchmark in the changing development of Canada's great transportation complex. It has unfortunately also been a year where crises and accidents well beyond the control of any of us have added new and perhaps frightening dimensions to the work we carry out on behalf of the people of Canada. The effective and innovative way in which those of you involved have tackled these unexpected setbacks have added to your own reputations as dedicated public servants; and, equally important, laid the way for substantial improvements in the future designed to augment safety and minimize accidents.

Each of us has an important role to play in the structuring of the new Ministry and as Minister of this enterprise which contributes so much to the well being and unity of our country I am depending on the continuance of your loyalty and devotion.

The new year brings with it more opportunities for us all and the challenge of even greater accomplishments, and I join with you all in looking forward to 1971 with confidence and enthusiasm.

To the many people who make up this great new Ministry I convey my best wishes for the Christmas season and wish you all a happy and prosperous New Year.

Permettez-moi de profiter de cette occasion pour vous exprimer ma sincère reconnaissance pour vos loyaux services et la conscience professionnelle dont vous avez fait preuve au cours de cette période vitale de la réorganisation du ministère des Transports. Par votre dévouement, votre travail, vos connaissances, vous avez fait de 1970 un palier marquant dans l'évolution du grand complexe que sont les transports au Canada. Cette année a malheureusement connu des crises et des accidents qui, par leur envergure, ont échappé à notre contrôle et ont considérablement accru, et même parfois rendu effrayant, le travail que nous réalisons au nom du peuple canadien. L'esprit d'organisation et d'innovation avec lequel vous avez lutté contre, ces revers inattendus a encore contribué à votre réputation de fonctionnaires dévoués; j'ajouterai qu'il a également conduit à d'importantes améliorations qui à l'avenir permettront d'augmenter la sécurité et de réduire les accidents.

Chacun de nous a un rôle important à jouer dans la structuration du nouveau ministère et, en tant que Ministre de cette entreprise qui contribue si fortement au bien-être et à l'unité de notre pays, je dois compter sur la loyauté et le dévouement que vous continuerez à manifester.

La nouvelle année apporte de nouvelles possibilités pour nous tous et le défi de réalisations toujours plus grandes; je me joins à vous pour envisager avec confiance et enthousiasme l'an 1971.

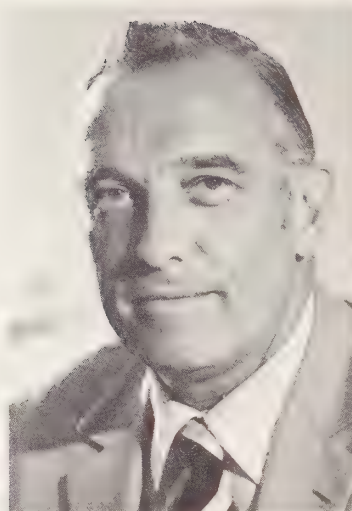
A vous tous qui constituez ce grand nouveau ministère, j'adresse mes meilleurs vœux de Noël et vous souhaite une heureuse et prospère Nouvelle Année.

Ministre

Minister



## New responsibilities



## Nouvelles tâches

During the past year we in the Ministry of Transport have been faced with new responsibilities that have been a real challenge to us all. In 1970 we embarked on the development of a new philosophy and perhaps one of the most thorough reorganizational programs ever undertaken in government.

By taking the change in our own hands in an orderly way, and by working together as a team, we have achieved much in recent months in this reorganization. During the initial stages the loyal support of the Ministry staff has been evident—the deep interest you all have taken in the tasks allotted to you have made this complex task more capable of solution and given us all both enthusiasm and courage for tackling the difficult changes that lie ahead. Equally important, those of you in the field have continued to maintain in your day to day functions the high standards that have been traditional to the Department.

I deem it a great privilege to be associated with an organization that has over the years built up such a reputation for progress and to play a part in tackling with you all the many important undertakings that lie ahead. May your own satisfaction in your work continue in the New Year—may it be a Happy Christmas and a successful year ahead for all of you.

Au cours de l'année qui vient de s'écouler, nous du ministère des Transports, avons dû assumer de nouvelles tâches qui ont représenté un véritable défi pour nous tous. Nous avons entrepris en 1970 l'élaboration d'une nouvelle philosophie des transports ainsi que de l'une des réorganisations les plus complètes jamais entreprise au gouvernement.

En faisant tout par nous-mêmes avec ordre et dans un esprit d'équipe, nous avons accompli une bonne partie de cette tâche au cours des récents mois. L'appui loyal du personnel du Ministère a été évident au cours des phases initiales de ces travaux; l'intérêt profond que vous avez tous porté aux tâches qui vous avaient été attribuées a facilité l'exécution de cette œuvre complexe et nous a donné à tous l'enthousiasme et le courage nécessaires pour entreprendre les changements difficiles qu'il nous reste à faire. Il importe également de rappeler que ceux d'entre vous qui travaillent à l'extérieur ont continué de maintenir dans l'exercice des fonctions quotidiennes les normes élevées qui font partie de la tradition du Ministère.

J'estime que c'est un grand honneur que de faire partie d'une organisation qui a établi, au cours des années, une excellente réputation d'efficacité et de prendre part avec vous aux nombreux projets importants à réaliser. Puissiez-vous continuer d'éprouver, au cours de la nouvelle année, la même satisfaction dans votre travail; à vous tous, je souhaite un joyeux Noël et tout le succès possible pour l'année qui vient.

Le sous-ministre

A handwritten signature in dark ink, appearing to read 'O.G. Moner'. The signature is fluid and cursive, with a large 'M' and a long horizontal stroke at the end.

Deputy Minister

# Transportation Council

# Le conseil des transports



W. H. Huck



Pierre Camu



G. A. Scott



Hon. Don Jamieson



O. G. Stoner



Gérard Duquet



Hon. J. W. Pickersgill



W. M. Gilchrist

## Almost unparalleled challenge

The many actions which must be taken within the Canadian Air Transportation Administration to give prompt and orderly effect to implementation of the Ministry concept combined with similar actions required to meet the needs of the air industry face us with an almost unparalleled challenge. While we have, perhaps, become well accustomed to responding to the needs of such a dynamic industry, we will be severely tested in tackling and completing in unison these two major tasks promptly and with a minimum of disruption to the public, the industry and our own organization.

Jumbo Jets have already commenced to discharge enormous loads of passengers, baggage, mail and freight at Canadian airports where we can expect and must be prepared to meet the problems and strains associated with such arrivals and departures. VTOL and STOL aircraft are among other fascinating innovations which pose problems associated with the development of their unique capabilities.

Supersonic civil transports will probably enter commercial service in the next few years. We must, therefore, have fully considered their impact well before their introduction in terms of environmental effects as well as a host of other probabilities and even possibilities about which we do not yet have complete information.

We have already made progress towards meeting these challenges in the provision of new facilities such as the new super airport now being developed at Ste. Scholastique, Quebec; in new approaches to Air Traffic Control problems, ground transportation, etc. and in expanding the efficiency and capacity of existing facilities.

In our plans to realign and strengthen the Canadian Air Transportation Administration organization, we must make every effort to ensure that such plans reflect fully the objectives of the Ministry. In doing so, full advantage will have to be taken of the increased freedom of action inherent in a Ministry system in order to play a full part in the transport family in the provision of safe, efficient and economic facilities and services for aeronautics as an integral part of the nation's all-embracing transportation system.



J. C. Cornblat



J. R. H. Noble



Andrew Chatwood



André Laframboise



Robert Turner

## Un défi sans pareil

Les nombreuses mesures que doit prendre l'Administration du transport aérien du Canada pour mettre en œuvre, de façon rapide et méthodique, la politique adoptée par le ministère et les initiatives semblables qu'il faut prendre pour répondre aux nouveaux besoins de l'industrie aéronautique, nous obligent à relever un défi presque sans pareil. Bien que nous ayons pris l'habitude de répondre aux besoins d'une industrie dynamique, nous allons devoir mener à bien dans le plus bref délai ces deux tâches d'envergure, en désorganisant le moins possible l'industrie et nos propres services et en continuant d'assurer les services auxquels le public a droit.

Le trafic des avions géants a déjà pris une certaine importance et comme ces avions transportent un nombre très élevé de passagers, et une énorme quantité de bagages, de marchandises et de sacs de courrier, les arrivées et les départs dans les aéroports canadiens créent une certaine tension et posent des problèmes auxquels il nous faut trouver une solution. Les avions VTOL et STOL qui ont déjà dépassé le stade de l'étude, soulèvent des problèmes créés par leurs possibilités uniques.

Les avions supersoniques servent déjà dans les transports civils et ils seront probablement utilisés dans le secteur commercial dans les toutes prochaines années. Par conséquent, il faut déjà envisager leur impact sur l'environnement aussi bien qu'une multitude de probabilités ou même possibilités au sujet desquelles nous n'avons pas encore de renseignements complets. Nous avons déjà fait des progrès considérables pour répondre à ce défi, en créant des installations nouvelles comme l'aéroport géant qui doit être construit à Sainte-Scholastique (Qué.); en étudiant de nouvelles façons d'aborder les problèmes du contrôle de la circulation aérienne, les transports au sol, etc. . . . et en développant l'efficacité et la capacité des installations existantes.

En agissant ainsi, nous tirerons le meilleur parti de l'élargissement de la liberté d'action propre à l'organisation ministérielle, afin de jouer un rôle prépondérant dans le domaine qui nous intéresse et d'assurer la mise en place d'installations et de services dont l'exploitation sera efficace, peu coûteuse et sans danger et formera partie intégrante du réseau de transport national.



John Gratwick



Wilbrod Leclerc



W. F. Nelson



C. C. Halton



Stuart T. Grant

L'Administrateur des transports aériens du Canada

W. H. Huck

Administrator, Canadian Air Transportation Administration



# Making school children experts on far north

A friendly and highly informative link between Canada's weathermen in the far north and pupils of a London, Ontario, school was forged earlier this year in a project developed at the school.

Through this project, radio contact was made with Ministry of Transport employees at Arctic weather station Alert, 500 miles from the North Pole. The pupils of the Junior-Intermediate Opportunity Class at Roosevelt Public School in London have thus been made more aware of life in the Arctic than possibly any other school children in southern Canada.

The class's teacher, Miss Marilyn Roberts, in a letter of appreciation to J. R. H. Noble, Administrator, Canadian Meteorological Service, paid tribute to the men at Alert and said they had been a tremendous help in providing the class with "a very informative and delightful learning experience."

In their project the class obtained large building crates, big enough for the children to crawl into, and used them to construct a model Arctic weather station. A large ball was sliced in half to make a weather dome for one roof. Following detailed instruc-

tions from Alert, the pupils cut out windows, folded cardboard for triangular roofs, built porches and a water tower.

However, the model differed in colour from the Alert station. Whereas the latter is painted in orange, the buildings in the Roosevelt classroom were painted with psychedelic colours and mod slogans like "Peace" and "Love".

The display included potted moss and dried plants as well as actual photographs of the outpost. For added atmosphere one of the men at Alert loaned the school the skull and horns of an Arctic muskox.

In a letter to Miss Roberts, the Meteorological Service in Toronto wrote: "It is most gratifying to know that our men stationed in the far north are sufficiently interested in the learning experience of young minds to take time out from their schedules to provide material and assistance to the students."

"We are very pleased that your Junior-Intermediate Opportunity Class has had the opportunity of learning about the operations of the high Arctic weather stations. We believe it is a good experience to expose youngsters to this type of information as it broadens their horizons and provides outlooks in human endeavour."

## Attracts attention from far and near

The computer assisted Marine Traffic Control system for the St. Lawrence River continues to attract transport and harbour officials from all over the world. Recent visitors were a delegation from the Panama Canal, Le Havre, Ministry of Transport in Paris, and the West German Transport Department.

Having similar traffic problems to our own, the visitors were able to see the Canadian solution by observing in operation the first computer assisted Marine Traffic Control system in the world.



"PROJECT ALERT"—Proud pupils of the Junior-Intermediate Opportunity Class at Roosevelt Public School, London, Ont., with their "Project Alert" display

«PROJECT ALERT»—Nous voyons ici un groupe d'élèves d'une classe spéciale de niveau intermédiaire et junior de l'École publique de London (Ont.) très fiers de leur kiosque «Project Alert».

# First Eskimo-staffed weather station

## ESKIMO METEOROLOGICAL OBSERVERS

—After a training program at Frobisher Bay, these four Eskimo men have started operation of the first all-Eskimo-staffed meteorological station at Cape Dorset. They are, from left: Mathewsie Igiu, Sailar Osoochiak, Kardik Samuelli and Isaaci Osowetok.

OBSERVATEURS MÉTÉOROLOGIQUES ESQUIMAUX—Quatre Esquimaux qui ont bénéficié d'un stage de formation à Frobisher Bay travaillent maintenant à la station météorologique de Cape Dorset. Ce sont de gauche à droite: MM. Mathewsie Igiu, Sailar Osoochiak, Kardik Samuelli et Isaaci Osowetok.



Four young Eskimo men, members of the West Baffin Eskimo Co-operative started operation in September of the Ministry of Transport's first all-Eskimo-staffed meteorological station at Cape Dorset, Baffin Island. The men are Kardik Samuelli, Isaaci Osowetok, Sailar Osoochiak and Mathewsie Igiu, all of Cape Dorset.

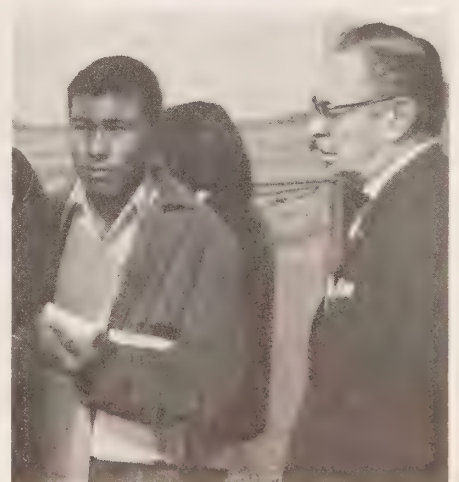
The Eskimo men commenced a one and a half month training program at Frobisher Bay on July 13. The course included three weeks of classroom training, two weeks on-the-job instruction at the Frobisher Bay station, and a final two weeks of classroom work. They are now stationed at Cape Dorset on Hudson Strait in a new and well-equipped meteorological station.

The new station is designed to handle the meteorological tasks that in the past have been performed at the Transport Ministry's marine radio station on Nottingham Island, in the entrance to Hudson Bay. Since 1928 and until last year this station provided both communications and meteorological services for shipping.

Last year, as a result of the development of new and more efficient communications facilities in the Far North, the station's services were reduced to the operation of an automatic radio beacon and the provision of weather reports to the Transport Ministry's meteorological network.

The new Cape Dorset weather station will provide reports to shipping but its program will be of special importance to the rapidly growing air traffic over the Arctic and sub-Arctic regions. It will be an important new component of the nation-wide meteorological observing network.

The Eskimo staff will make 14-hourly surface weather observations each day, including such things as wind direction and speed, temperature, humidity, barometric readings, cloud ceiling and quantity, precipitation and visibility. At six-hour intervals a synoptic weather report will be made, thus rounding out a broad recording and reporting program for use by forecasters throughout the Minister's meteorological network.



STUDENT AND TEACHER—Roméo Richard, regional instructor in meteorology, gives some advice to Sailar Osoochiak.

L'ÉLÈVE ET LE MAÎTRE—Monsieur Roméo Richard, instructeur régional en météorologie, donne ici quelques conseils à Sailar Osoochiak.



## Un chef mécanicien qui voit vraiment à son affaire

par V. Cardin  
*Laboratoire d'hydraulique  
Chenal maritime du Saint-Laurent*

Si on demandait au personnel du n.g.c.c. *Ville-Marie* de nous citer en exemple un chef mécanicien, le nom de Paul-Eugène de la Durantaye serait sans doute fort populaire. Pourquoi? Si l'on décrit le travail d'un chef mécanicien, digne de ce nom,

comme étant celui d'assurer l'entretien et le parfait fonctionnement de toutes les pièces mécaniques et électriques, nous dirait-on, il est impossible de ne pas penser à M. de la Durantaye.

### La grande question

Pour un chef mécanicien, l'éternelle question qui se pose à son esprit est de savoir quand un simple travail d'entretien

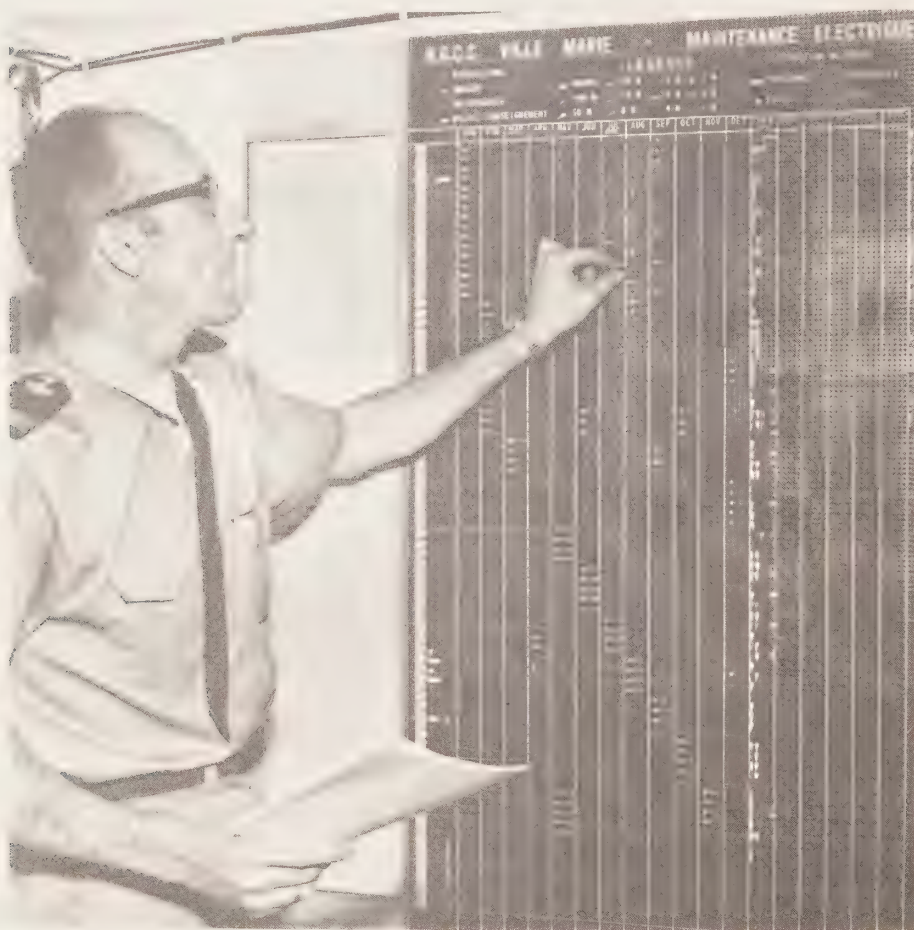
suffit et quand il est préférable de procéder à une vérification plus sérieuse. Vraiment, il s'agit là d'une décision difficile à prendre puisqu'elle suppose la connaissance du moment et de la nature des derniers travaux exécutés sur cette pièce. Devant ce dilemme, deux possibilités existent: ou bien on peut accomplir quelques travaux routiniers d'entretien selon un calendrier préparé antérieurement, ou bien on laisse les choses suivre leur cours normal jusqu'au jour où une réparation majeure s'imposera.

Simple comme bonjour, mais encore fallait-il y penser, et c'est là le mérite de M. de la Durantaye: pourquoi pas un tableau susceptible de nous offrir en un coup d'œil le dossier complet sur la maintenance de l'équipement électrique du navire? Et c'est ainsi qu'aujourd'hui le *Ville-Marie* possède un tel tableau constamment perfectionné par son inventeur qui en a fait un instrument essentiel de travail pour le chef mécanicien du navire. En effet, grâce à l'utilisation de symboles, de couleurs et de formes, il pourra connaître d'une façon extrêmement rapide la date et la nature des derniers travaux de même que le moment des prochaines vérifications ou réparations.

Pour compléter le tout, un système de fiches appelé Kardex qui est placé à gauche du tableau, contient toutes les données sur les différentes pièces des machines ainsi que le traitement dont elles ont été l'objet dans le passé. De plus, ces fiches indiquent le responsable des derniers travaux sur cette pièce à savoir si elles ont été faites par les membres de l'équipage ou quelqu'un de l'extérieur.

### C'est vraiment utile!

Selon M. de la Durantaye, l'utilité d'un tel tableau ne fait plus de doute. A cette fin, le chef mécanicien du *Ville-Marie* nous rappelle son expérience à propos d'une génératrice devant subir d'importantes réparations au mois de janvier alors que de simples vérifications devaient avoir lieu durant les mois de mai, juillet, septembre et décembre. Mois de juillet, désagréable surprise: on découvre que les lectures d'isolation sont mauvaises, même après le nettoyage des pièces facilement accessibles. Ainsi amené à vérifier d'une façon plus complète la génératrice «malade», on dé-



AU MOIS D'AOÛT, IL FAUDRA VÉRIFIER... Voilà ce que vient d'indiquer M. P.-E. de la Durantaye, chef mécanicien du n.g.c.c. *Ville-Marie*, au tableau sur lequel il retrouve toutes les informations nécessaires au bon fonctionnement des machines. A la gauche de ce tableau, on remarquera la présence de fiches qui contiennent les principales données sur les différentes pièces de la machinerie.

IN AUGUST, WE WILL HAVE TO CHECK... This is what Paul-Eugène de la Durantaye, chief engineer on the CCGS *Ville-Marie*, is indicating on the board on which can be found all the information required to have machines in good running order. At the left of the board can be seen the cards giving all the necessary data on the engine-room.

(suite à la page 11)

# Solids pipelines

## —the Canadian research effort

by Martin Brennan  
Manager Land Transport Group,  
Canadian Transport Commission

With so much of Canadian potential wealth so far from ocean ports or major industrial centres, any transportation system which offers the promise of cheaper more efficient movement of commodity is worthy of serious consideration.

At first sight, the appeal of the solids pipelines is fairly obvious. Many materials such as potash, coal, sulphur and iron ores can be ground into particles, mixed with a carrier fluid such as water and pumped as a slurry through a pipe.

Materials which do not readily mix with water may be wrapped in some form of capsule and carried along with the fluid.

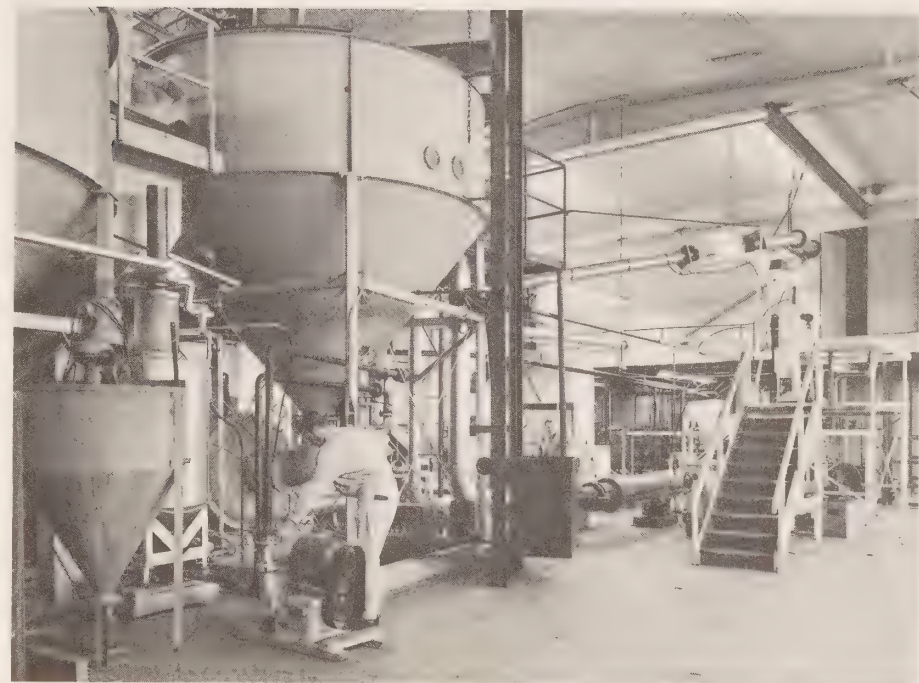
If the carrier fluid is oil, then a pipeline might serve a dual purpose. Batching might handle several commodities consecutively.

The pipeline system is ideal for one-way traffic typical of the flow of many industrial raw materials from mine to market. Once put down, it is relatively free from operating cost increases, since little manpower is involved in its operation. Although research work in solids pipelines dates back many years, it is only in recent years that commodity pipelines of any significant length have been built. One of the longest, the Black Mesa line in Arizona, is 273 miles long. Throughout the world only a very small number, fewer than 10, are more than 50 miles long. There are none in Canada.

### Research activity

There is however, significant research activity in solids pipelines in this country, although work at some centres has been spasmodic over the last few years. Perhaps the best known Canadian university centres where activity is underway are Toronto and Saskatchewan. At both sites the work is on a laboratory scale, with pipe loops no more than one to two inches in diameter, and up to 50 feet in length.

Work at Toronto includes studies of the effect of pipes with spiral ribs on slurry flow, particle size analysis and fundamental



**PIPELINE RESEARCH**—Solids pipeline facilities in the pilot plant at Saskatoon. Until recently this plant had depended for its existence on small amounts of contract research picked up from industry. However, it has been found that this plant, with its experienced staff, has a contribution to offer in government-sponsored solids pipeline research.

studies on the behaviour of concentrated suspensions. Work at Saskatoon includes a study of pipe wall conditions, the effect of various additives or friction coefficients and a study of corrosion effects in a small potash loop.

The Saskatchewan Research Council operates a slurry pilot plant. The plant was built as part of a project undertaken by the Interprovincial Steel and Pipe Corporation (IPSCO), and partly financed by the Department of Industry, Trade and Commerce under its PAIT program. The plant consists of pipe loops of 2, 6, 10 and 12 inch diame-

**RECHERCHE SUR LES PIPELINES**—Les pipelines pour transport de solides dans l'usine moderne située à Saskatoon. Jusqu'en ces tous derniers temps, cette usine ne comptait que sur de petits contrats de recherche provenant de l'industrie. Toutefois on a constaté que cette usine, dotée d'un personnel expérimenté, peut faire un important apport à la recherche sur les pipelines pour transport de solides commanditée par le gouvernement.

ter and of 300 to 400 feet in length. Pumps, mixing bins, sampling equipment, instrumentation controls and cooling equipment are housed in a building approximately 100 feet by 60 feet.

The IPSCO project was aimed at gathering data for the design of a potash pipeline.

### Wood chip trials

Other work of significance in Canada includes the wood chip pipelining trials carried out by the Pulp and Paper Research Institute and the capsule pipeline work at

(Continued on page 10)



# Leading way in technical field with new high power radio beacon

A unique, completely solid-state, high-powered transmitter has successfully completed preliminary tests. This transmitter, developed for the Ministry of Transport, is to be used as an aircraft navigation radio beacon and also for ground-aircraft voice communication. It is the first of its type in the world and places Canada in the forefront of this fertile area of technology.

The Ministry's philosophy in procuring this type of equipment, as opposed to the conventional tube type, was to provide a high reliability navigational aid to users, which at the same time would require less frequent visits for maintenance purposes. The estimated MTBF (mean time between failures) for this equipment is about 4000 hours, or approximately six months.

The Ministry is procuring a total of 38 of these beacons for installation at various sites across Canada. They will be used in new beacon installations, and for replacement of obsolete equipment at existing sites.

The prototype equipment will be installed at La Scie, Newfoundland. Delivery of the remaining 37 equipments will be completed by December 1971.

The transmitter is high reliability equipment, with components chosen for their reliability characteristics; an additional unique design feature provides a further safeguard in the ability to continue to operate even in the event of partial failure internally.

All such high-powered transmitters in use throughout the world today employ vacuum tubes for generating the required radio energy power output. Small, low-powered solid-state transmitters have been designed and used successfully for several years, but the vital step across the wide gulf into the high power region awaited technological innovation capability.

The high power vacuum tube, with its rapid wear-out and finite life of the order of 2000 operating hours, is the weak link in existing transmitters with its attendant

requirement for replacement maintenance at regular periods. The new, solid-state transmitter, which uses transistors in place of the vacuum tubes, is free of this problem and has a much higher intrinsic reliability.

The development of this transmitter was initiated by the Ministry of Transport, which prepared a technical specification detailing its performance objectives for the equipment.

## SHIP-SHORE COMMUNICATIONS

With a view toward improving ship-shore communications coverage, particularly for the smaller CCG resupply vessels equipped only with radiotelephone, an HF radiotelephone service has been established through the Frobisher and Resolution Island communications stations on Channel 81 (4409.4/4110.8 kHz). Frobisher Radio provides a marine telephone and message service on this channel while the Resolution 1. station provides a message service only.

## Solids pipelines *(Continued from page 9)*

the Research Council of Alberta in Edmonton, where some experimental work on a 4-inch "shuttle" line is currently underway.

Recently in Edmonton, a pilot plant for 6-inch capsule pipelines was built and operated, again under a Department of Industry sponsored PAIT project with the Solids Pipelines Research and Development Association (SPRDA).

### CTC enters picture

In 1969, the newly-formed Research Division of the Canadian Transport Commission began an attempt to identify areas of transportation where research might prove profitable. Discussions were held with a variety of industrial interests and other government departments to try and determine whether solids pipelining was an appropriate area to receive encouragement and to identify what sort of work was needed and how existing Canadian talents might best be employed.

Most contacts claimed that one major factor inhibiting the development of strong

interest in solids pipelines schemes was the lack of large scale slurry property data availability in the open literature. Slurries are complex fluids, and most people who considered pipeline transportation at all over any distance felt sure that they would have to pay for pilot plant tests to obtain reliable friction head loss data etc. before they could come near to a reasonable economic evaluation of their proposed system.

Many then took their consideration no further. A need was stressed for the availability of better full-size data in the open literature, both as a better guide to pipeline feasibility and as a mean of allowing workers in smaller laboratory sizes to examine the effects of scale on their work.

### More data needed

In addition to the problem of data availability, there was general agreement on the need to undertake work leading to a better understanding of such problems as piping slurries in gradients, corrosion, erosion and the start-up and shut-down behaviour of lines.

In assessing the available talents for undertaking a government-sponsored program which would go some way towards fulfilling these needs, it became apparent that the pilot plant at Saskatoon, along with its experienced staff, had a contribution to offer. Support for the university centres has come from the National Research Council and although this has not been unduly large, it has been consistent.

The Research Division, therefore, sought and received authority to enter into a \$400,000 contract with the Saskatchewan Research Council for a three-year project in which large scale data on many of the typical candidate commodities will be obtained and published openly. In addition, an attack will be made on some of the problems mentioned.

In order to learn more about the true potentialities of capsule pipelining discussions are underway with the various interested parties aimed at identifying and establishing an appropriate research project in this field, hopefully, to include a larger scale research pipeline operated by the Research Council of Alberta.

# New navigation Aid non-maintenance light

Brockville, Ontario, is the first place in Canada to have the newest in navigational aids—a non-maintenance light which has been designed primarily for use in the Arctic and in other places where access and repairs are difficult.

The new light replaces the one previously on the public dock and is standard except for the source of power. This is provided by means of a radioisotope which generates heat in an enclosing cylinder. The heat is transformed into electricity through a thermo-electric process, thus providing continuous power to the lamp. It is expected that this device will provide continuous power over a period of at least three years.

The unit, which utilizes gamma energy, has been carefully safety-designed to ensure that the outside surface will have a lower radiation level than that of a domestic colour television set. It was developed by the Commercial Products division of Atomic Energy of Canada Limited in cooperation with the federal Ministry of Transport and has been approved by the Department of Health and Welfare and licensed by the Atomic Energy Control Board.

A new tower was designed to accommodate the power unit.

If the device works as well as expected it could be an important factor in extending the shipping season in the Arctic.



(Suite de la page 8)

## Ministry scholarship winners announced

O. G. Stoner, Deputy Minister, announced the seven winners of the 1970 Ministry Scholarships and recently offered his personal congratulations to the successful candidates.

The scholarship awards, each for \$500 went to:

Judith C. Fraser—daughter of Gordon Fraser, General Administration Branch, Ministry Headquarters;

Lynne R. Daniels—daughter of John Daniels, Aeronautical Engineering Division, Air Administration, Ottawa;

Glenda D. Jaffray—daughter of Duncan Jaffray, Marine Finance, Ottawa;

Byron R. Wentzell—son of Lawrence Wentzell, Lightkeeper, Liverpool, N.S.;

Glen V. Dexter—son of Reid V. Dexter, Meteorological Branch, (DND Attachment) Halifax, N.S.;

Stuart D. Stark—son of Robert Stark, Meteorological Branch, Air Administration, Western Region;

Roger M. Knox—son of J. L. Knox, Meteorological Branch, Air Administration, Pacific Region.

couvre que la cause de ces ennuis résidait dans les dépôts de poussière de carbone accumulés dans la partie arrière de l'armature. Grâce à ce tableau, la vérification routinière prévue évitait une panne possible, le remplacement de pièces et des réparations majeures coûteuses.

### Pas seulement pour lui!

Devant un tableau aussi sophistiqué susceptible de susciter l'envie des autres chefs mécaniciens de navires, ces derniers rêvent probablement de mieux connaître l'invention de M. de la Durantaye. Comme il serait assez difficile de vouloir donner ici tous les détails pertinents ou possibilités ayant trait à ce tableau, le chef mécanicien du *Ville-Marie* invite-t-il tous les intéressés à venir le rencontrer!



## Wintertime fun of snowmobiling



**Enjoy it, don't regret it**

With the introduction of the snowmobile about 10 years ago came a new wintertime activity for Canadians—and a multitude of problems for governments and landowners. One of the biggest of these problems has been to provide safe areas where the gigantic army of these off-road vehicles can cavort.

There are now more than a million snowmobiles in winter use in North America, and with the increased use of these vehicles has come an increase in accidents produced in snowmobiling.

Dr. William Ghent, Associate Professor, Queen's University, who has made a study of snowmobile accidents, says that in 1970 about 60 companies were engaged in the manufacture of "these self-contained snow dogs".

The growth of the industry has been phenomenal. In 1964 there were about 8,000 of these machines produced, and, with increased production each year, the 1970 figure was 350,000, making more than a million that will be in use over the snows of North America this winter.

"Thus", says Dr. Ghent, "we can see that the white frontier is well and truly tracked and winters will never be the same again."

Over the past eight years safety organizations have been making tests with the various makes and models of the snowmobile. It has been found that these snow vehicles perform well when operated on snow. They are easily controlled, reliable and seldom break down if properly maintained and operated.

However, on hard-packed snow or ice, such as well-travelled roadways, a snowmobile is practically unmanageable at any speed. For proper propulsion, braking and steering, the track and skis of a snowmobile must have snow to bite into.

Each winter brings more snowmobile deaths, the majority of them occurring on public thoroughfares. Figures from all the provinces show that snowmobiling has the highest fatality rate of any recreational activity.

The Ministry of Transport has set mandatory safety standards for all snowmobiles manufactured in, or imported into, Canada.

Through the introduction of these standards and the cooperation of manufacturers, clubs and individual users it is hoped to stop the needless snowmobile deaths and to promote the healthy growth of this valuable recreation. Proposed new federal Motor Vehicle Safety Regulations for snowmobiles were published in Canada Gazette September 19.

In the meantime, whether your snowmobile is one of the new high-powered models or one of the earlier conventional vehicles, here are some do's and don'ts:

- Snowmobiles should not be operated on any road or highway as this constitutes a hazard to traffic safety.
- Only very experienced or professional snowmobile operators should participate in major races or rallies. Novice drivers may only endanger themselves.
- Travelling over ice is extremely dangerous and a driver should know the area before venturing on a lake.
- It is dangerous to allow unaccompanied children to operate the snowmobile unless in the opinion of the parents the child is sufficiently mature and experienced to drive alone. It is suggested that no child under the age of 12 should be allowed to operate a snowmobile unless accompanied by an adult.
- If travelling in new territory or remote areas, it is suggested you should always travel in pairs or groups. Survival equipment (rope, emergency fuel supply, snowshoes or skis, a topographical map, hand axe, first aid kit, emergency rations) is a must.
- Skijoring, as in water skiing, can be fun provided the skier is sufficiently experienced to take evasive action in the event of the snowmobile stopping suddenly. Also, there should be a passenger in the snowmobile facing the rear to watch the skier at all times.
- Basic spare parts should always be carried, including a drive-belt and spark plugs with the necessary tools for installation.
- Gasoline de-icer should always be used in the gas tanks.

*Snowmobiling is winter fun for the whole family—don't let it become a family tragedy!*

## New air terminal

A contract for construction of a new air terminal building and related services at Fort St. John, B.C. has been let to W. J. R. Construction Ltd. of Dawson Creek, B.C. in an amount of \$457,312. Total cost to the Ministry for the project will be \$512,100 with an anticipated completion date of May 31, 1971.

# Prudence hivernale et motoneige



## Abandonnez-vous aux joies de la motoneige mais restez quand même prudent

L'apparition de la motoneige, il y a une dizaine d'années, a apporté un nouveau passe-temps hivernal aux Canadiens et aussi une multitude de problèmes à l'administration publique et aux propriétaires de terrains. L'un des principaux problèmes a été de trouver des espaces où cette armée gigantesque de véhicules tous terrains pourrait évoluer en toute sécurité. Plus d'un million de motoneiges feront leur apparition en Amérique du Nord au cours de l'hiver et, à mesure que le nombre de véhicules s'accroît, on voit augmenter le nombre d'accidents qui résultent de leur utilisation.

M. William Ghent, professeur agrégé de l'Université Queen's qui a fait une étude sur les accidents de motoneige, affirme qu'en 1970 soixante sociétés se partagent la fabrication de ces «chiens de traîneau des temps modernes».

La croissance de l'industrie de la motoneige constitue une chose phénoménale. En 1964, on fabriquait environ 8.000 motoneiges et la production n'a cessé de croître pour atteindre 350.000 unités en 1970, de sorte que plus d'un million de ces engins sillonneront les neiges de l'Amérique du Nord cet hiver.

M. Ghent ajoute que «la grande solitude blanche est désormais chose du passé, et a fait place à un véritable réseau de pistes. Les hivers d'antan ne reviendront plus».

Au cours des huit dernières années, les associations de sécurité ont soumis à des essais les différents modèles des diverses marques de motoneige. On a constaté que ces véhicules sont satisfaisants pour l'utilisation dans la neige. Ils sont faciles à diriger, fiables et tombent rarement en panne si on les entretient et si on les utilise convenablement.

Toutefois, sur la neige durcie et sur la glace, sur une route fréquentée par exemple, il est pratiquement impossible de diriger une motoneige quelle que soit sa vitesse. En effet, il faut que la chenille et les skis puissent s'accrocher à la neige pour fournir une propulsion, un freinage et un contrôle de la direction satisfaisants.

Le nombre des victimes des accidents de motoneige qui se produisent surtout sur les routes publiques augmente chaque hiver. Dans toutes les provinces, les statistiques concordent et montrent que c'est la motoneige qui vient en tête de toutes les activités de loisir en ce qui concerne le nombre de tués.

Le gouvernement fédéral projette d'établir des normes obligatoires de sécurité visant toutes les motoneiges, fabriquées ou importées au Canada. Grâce à ces normes et à la coopération des constructeurs de motoneiges, des clubs et des utilisateurs, on espère arrêter le carnage inutile que provo-

que la motoneige et encourager la saine croissance de ce loisir enrichissant. En attendant, quelle que soit la motoneige que vous possédez, qu'il s'agisse d'un nouveau modèle puissant ou d'un ancien modèle plus classique, voici quelques conseils qui vous sont donnés par les associations de sécurité et que vous devez suivre:

- Ne pas utiliser les motoneiges sur une route, qu'elle soit à faible ou à grande circulation, car cela constitue un danger pour la circulation routière.
- Seuls les conducteurs de motoneige expérimentés et les conducteurs professionnels peuvent prendre part aux courses et aux rallys importants. Les débutants s'exposent inutilement.
- La conduite sur la glace est très dangereuse et il ne faut s'aventurer sur un lac que si on connaît bien l'endroit.
- Il est dangereux de laisser des enfants non accompagnés conduire une motoneige sauf si les parents pensent que l'enfant est assez raisonnable et a une expérience suffisante pour conduire seul. Il est conseillé de ne pas laisser conduire par un enfant de moins de douze ans sauf s'il est accompagné par un adulte.

(Suite à la page 14)



## Prudence hivernale

(Suite de la page 13)

- Lorsque vous vous déplacez dans une région inconnue ou peu fréquentée il est conseillé de voyager par groupes de deux ou plus. Il est indispensable d'emporter du matériel de survie (corde nourrice de carburant de secours, raquettes ou skis, carte topographique, hachette, trousse de pharmacie, rations de secours).
- Le «skijoring», ce sport qui consiste à se faire remorquer à skis par une motoneige peut, comme le ski nautique, être très agréable à condition que le skieur soit assez expérimenté pour pouvoir éviter de heurter l'arrière de la motoneige dans le cas où celle-ci viendrait à s'arrêter soudainement. Il devrait aussi y avoir sur la motoneige une personne tournée vers l'arrière pour surveiller constamment le skieur.
- On devrait toujours emporter des pièces essentielles de rechange entre autres une courroie de transmission et des bougies, ainsi que les outils nécessaires pour les monter.
- Les réservoirs de carburants devraient toujours être équipés d'un réchauffeur de carburant.

*La motoneige peut apporter de grandes joies à toute votre famille, mais ne la laissez pas devenir un instrument de deuil.*

## Choix des boursiers pour 1970

Le sous-ministre, M. O. G. Stoner, a rendu public les noms des sept boursiers du ministère des Transports, et en a profité pour féliciter les candidats choisis:

Judith C. Fraser—fille de M. Gordon Fraser, Direction de l'administration générale, bureau central du Ministère;

Mlle Lynne R. Daniels—fille de M. John Daniels, Division de la technique aéronautique, Administration des Services de l'Air, Ottawa;

Mlle Glenda D. Jaffray—fille de M. Duncan Jaffray, Finances (Marine), Ottawa;

M. Byron R. Wentzell—fils de M. Lawrence Wentzell, gardien de phare, Liverpool (N.-É.);

M. Glen V. Dexter—fils de M. Reid V. Dexter, Direction de la météorologie (rattaché au ministère de la Défense), Halifax (N.-É.);

M. Stuart D. Stark—fils de M. Robert Stark, Direction de la météorologie, Administration des Services de l'Air, Région de l'ouest;

M. Roger M. Knox—fils de M. J. L. Knox, Direction de la météorologie, Administration des Services de l'Air, Région du Pacifique,

*si vous  
ne le faites pas  
rien ne se fera*

**PARTAGEONS**



## ANNUAL PICNIC MINISTRY OF TRANSPORT



## PIQUE-NIQUE ANNUEL DU MINISTÈRE DES TRANSPORTS

The Flight Services team, winners of the tug o' war contest at the Ministry's annual picnic, receives the trophy from the Ministry Queen. On right is Fred Lawton, Recreation Association treasurer.

L'équipe des Services de vol a remporté l'épreuve de souque à la corde au pique-nique annuel du Ministère et elle reçoit le trophée des mains de la Reine du Ministère. À la droite se trouve M. Fred Lawton, trésorier du *Recreational Association*.

Queen of the Ministry of Transport, Miss Shirley Ann Scott, Purchases and Contracts Division, with some of the young competitors at the Ministry's annual picnic in Vincent Massey Park, Ottawa.

La Reine du ministère des Transports, Mlle Shirley Ann Scott, Division des achats et des contrats, est ici photographiée en compagnie de quelques jeunes concurrents lors du pique-nique annuel du ministère des Transports au parc Vincent Massey.

## *Paintings and drawings display his deep interest in history*

Keenly interested in what he calls "the priceless heritage of history", George Sherwood of the Ministry's Montreal Area Control Centre earlier this year played a prominent part in the fourth anniversary celebration of the Lachine cultural centre in Quebec.

For the occasion, the centre presented a "History in Art" in pictures, maps and artifacts, and contributing in no small way to the success of the celebrations were 26 sketches by Mr. Sherwood.

Mr. Sherwood takes a keen interest in the preservation of historic sites and buildings in the Lachine area. The fine sketches which he displayed at Lachine showed his careful observation of the historical value of his subjects. This visual presentation had long been the ambition of Mr. Sherwood.

After attending Westmount schools, Mr. Sherwood studied art until this pursuit was interrupted by World War Two. He did a stint in the R.C.A.F. Coastal Command and worked as a commercial artist in Montreal

for a number of years.

He has been with the Ministry of Transport for 10 years in Air Traffic Control and in his spare time is kept constantly occupied with his drawings and paintings in oil and acrylics.



Mr. Sherwood is seen here with two of his sketches.

On voit ici M. Sherwood avec deux de ses croquis.

## **Les peintures et dessins d'un employé montrent son vif intérêt pour l'histoire**

Vivement intéressé par ce qu'il appelle «le précieux héritage de l'histoire», George Sherwood, employé du ministère du Centre de contrôle de la région de Montréal, a joué, au début de cette année, un rôle important dans les célébrations du quatrième anniversaire du centre culturel de Lachine, à Québec.

A cette occasion, le centre a présenté une «histoire de l'art» en exposant des tableaux, cartes et objets divers, et les 26 croquis de M. Sherwood n'ont pas peu contribué au succès de ces célébrations.

M. Sherwood témoigne d'un profond intérêt pour la conservation des sites et monuments historiques de la région de Lachine, et les jolis croquis qu'il a exposés à Lachine prouvent son intégrité dans sa façon d'observer ses sujets et d'en discerner la valeur historique. Depuis longtemps, M. Sherwood avait l'ambition de faire cette exposition.

Après avoir fréquenté les écoles de Westmount, M. Sherwood fit des études d'art qui furent interrompues par la Seconde guerre mondiale. Il s'engagea dans

l'Aviation royale du Canada, puis travailla à Montréal comme artiste commercial pendant plusieurs années.

Il travaille depuis dix ans pour le compte du ministère des Transports, au contrôle de la circulation aérienne, et il consacre son temps libre à faire des dessins et des peintures à l'huile et à l'acrylique.



## appointments



**Frank Joseph West**

Frank Joseph West, formerly Transport Economist with the Government of Nova Scotia, was appointed earlier this year Senior Highway Economist in the Ministry of Transport.

Mr. West had worked in the trucking industry for 13 years and operated his own transport company. He holds a Bachelor of Commerce degree in Transport Economics from the University of British Columbia.

In his new position he provides policy advice on matters related to road transport and undertakes research on all matters related to motor carriers. He represents the Ministry at conferences and maintains liaison with provincial governments, trucking and bus associations and companies.

**M. Frank Joseph West**

M. Frank Joseph West, qui était économiste du transport au service du gouvernement de la Nouvelle-Écosse, a été nommé il y a déjà quelque temps cette année économiste principal, chargé des routes au ministère fédéral des Transports.

Après avoir, M. West avait été membre de l'industrie du camionnage pendant 13 ans et il exploitait sa propre compagnie de transport. Il détient un diplôme de bachelier en commerce avec spécialisation en économie des transports, de l'Université de la Colombie-Britannique (U.B.C.).

M. West sera un conseiller en matière de transport par la route et entreprendra des travaux de recherche sur tout ce qui concerne les transporteurs routiers. Il représentera le Ministère aux conférences et assurera la liaison avec les gouvernements provinciaux et les associations et compagnies de camionnage et d'autobus.

## nominations



**Alan C. Weaver**

Alan C. Weaver, former Director of Transportation Planning Analysis, is now Deputy Administrator, Canadian Surface Transportation Administration for the Ministry of Transport.

The administration's task is to improve the efficiency and business management of federal operations in surface transportation. It will administer the government's role in motor vehicle regulation and provide information and advice on operating problems of surface modes of transportation.

A native of Toronto, Mr. Weaver, 47, is a graduate in electrical engineering from McGill University. Following service in the RCAF during World War Two and employment with Bell Telephone Company, he joined Canadian National Railways in 1948, and held various positions at Moncton, Montreal and Winnipeg before joining the Department of Transport in 1969.

**M. Alan C. Weaver**

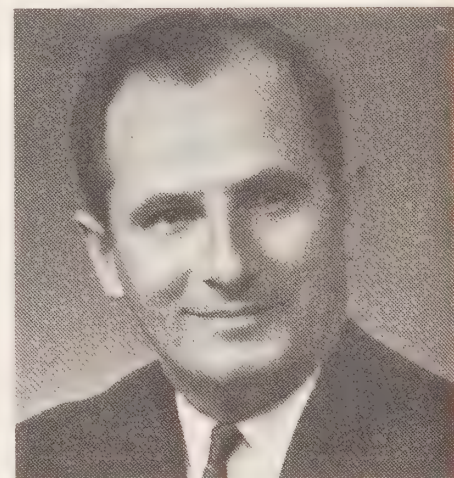
M. Alan C. Weaver, qui était notre directeur du Service de l'analyse de la planification, vient d'être nommé administrateur adjoint de la nouvelle Administration des transports de surface créée au sein de notre ministère des Transports.

La tâche de la nouvelle Administration consistera à rendre plus efficace la participation fédérale aux opérations de transports de surface et d'y introduire l'esprit des affaires. Relèveront également du nouvel organisme le rôle gouvernemental dans la réglementation des véhicules automobiles et la consultation ainsi que l'information dans le domaine des problèmes opérationnels qui se posent dans les transports de surface.

## Chief meteorologist new alumni president

Don Scott, Officer-in-Charge of the London Weather Office, who is the current President of the University of Western Ontario Alumni Association, has some strong ideas about his job. "Some of the alumni have been away from the university for a number of years, see changes being made in areas like academic flexibility, and they become perturbed. Part of my job as Alumni President will be to explain to them the rationale and necessity for these changes."

Don feels that as the grads leave, they tend to think of the university as remaining the way they last experienced it. Thus, when they return, it is not surprising that they are jarred by the physical and philosophical changes throughout the structure of the university. Don's close involvement with Western allows him to study and evaluate each change as it occurs, and in this way, he can supply background information to the Alumni and help keep them filled in on the dynamic changes in progress at Western.



Thousands, of course, know Don in his other hat: that of Chief Meteorologist for the Ministry of Transport's London Weather Office. Don graduated in Arts and Science in 1952, and went on to do a further course with the MOT in Toronto. After working in Halifax and Ottawa, he was "loaned" to the RCAF for three years of service in Germany, spent another two years in Trenton, Ontario, before returning to London to take up the post of Chief Meteorologist at the newly-opened London site in April 1960.

On top of his duties with the Weather Office, Don is the "weatherman" for CFPL-TV, appearing on the supper and late evening newscasts to explain the weather to the thousands of viewers who, he admits, sometimes seem to think that he makes the weather, rather than forecasting it.

# Express thanks to Coast Guard

*Service by ships*

The master of a small fishing vessel rescued from Arctic ice last Spring by Canadian Coast Guard icebreaker *Labrador* wrote to Minister of Transport Don Jamieson to express his thanks.

"We were trapped in heavy ice for 72 hours without food and in danger of being crushed in the ice," wrote John O'Dell, Master of MV *Cape Kennedy II*, sailing out of West St. Modeste, Labrador.

"The day the *Labrador* came to our rescue April 18, it was blowing 50-60 miles per hour and the visibility was zero in the snow. We were drifting fast and the *Labrador* had to proceed about 150 miles to us. We had no way of giving our position, but the captain came right to our side the same as if it was a clear day. That night, at nine o'clock, the light of the *Labrador* was the most welcome sight I ever saw".

He cited Captain Paul Tooke, Master of the *Labrador*, as "the kindest man I ever met. He was on deck to greet us when we came aboard and he did everything in his power to make us comfortable.

"The captain of the *Labrador* did not have to meet us on deck or take us to supper. We did not expect it; we were happy to be on board. But he treated us more like guests than he did a crew of sealers from Labrador.

"I know that it's their job, search and rescue, but the kindness they showed will never be forgotten by the crew of *Cape Kennedy* or their families in West St. Modeste".

## Ministry pays tribute to weather observers

The captains and officers on 41 merchant and Canadian government ships have received a total of 65 Ministry of Transport awards for excellence in their voluntary work of making weather observations during their voyages on the high seas, Canadian coastal waters and the Great Lakes in 1969.

Most of the information on weather conditions over the oceans of the world is provided by about 4,000 ships of some 35 different maritime nations. Canada has enlisted the aid of more than 200 ships whose officers observe the weather at fixed standard hours each day and send a coded report by radio to the nearest coastal receiving station in any part of the world. The report is then relayed by landline networks to the weather services of a score or more different nations. From the thousands of ships' weather reports received every day, the meteorologist, whether he works in Canada or any other country in the world, is able to draw his weather maps over the immense ocean areas which cover 70 per cent of the earth's surface.

These maps form the basis of marine

weather forecasts and warnings which are broadcast to ships all over the world several times a day, only a few hours after the ships' officers have made the observations on which the forecasts are based. Hence maritime meteorology is a two-way arrangement in which mariners receive weather advice, often vital to their operations, in return for the basic weather reports provided.

The awards themselves, in the form of suitably inscribed books of current or general interest, are a small tangible token of the Ministry's appreciation for important work done on its behalf.

In addition, a group award for excellence in marine weather reporting was made to the scientific staff of the Canada Centre for Inland Waters who served on the Great Lakes research ships C.S.S. *Limnos* and MV *Martin Karlsen*, and to the scientific staff of the Great Lakes Institute, University of Toronto, who served on the Great Lakes research ship CCGS *Porte Dauphine*. Each staff group received a copy of Alan Moorehead's "Darwin and the Beagle".

## Aid from coast guard

Tribute has been paid to the fast organized action of the Canadian Coast Guard helicopter which played a prominent part in the aid given to victims of the derailed CN train near Prince Rupert, B.C. July 20.

The crew of the Coast Guard helicopter had joined doctors, nurses, firemen, policemen and railway employees in going to the aid of victims of the disaster.

Two boys were taken aboard the helicopter and were flown to Prince Rupert.



Great Lakes research ship CCGS *Porte Dauphine*



# This system "sees" at sea without sight

A new electronic navigation system which draws on "moonshot" technology will enable the Canadian Coast Guard icebreaker *Norman McLeod Rogers* to continue operations in the St. Lawrence Ship Channel this winter despite poor visibility conditions.

The system, which operates on the radar principle and is totally independent of visibility conditions, was installed temporarily on *CCGS Ernest Lapointe* last fall for demonstration and advanced testing out of Trois Rivières, Quebec. William O'Malley, Chief of the St. Lawrence Ship Channel Division, was host and principal speaker at a number of demonstrations attended by pilots and other members of the press, including a representative of *Transport* magazine.

The helmsman stood in the blacked-out wheelhouse. Windows were covered so that he could not see the buoys or landmarks. He watched the needle on a left-right indicator and a television-type screen, where a tiny point of light moving on a chart of that section of the river indicated the position and course of the ship. William O'Malley said that the system could pinpoint the position of a ship or other mobile object with an accuracy of approximately two meters or less at any given instant, thus permitting a ship to navigate on a predetermined course with the same accuracy.

The system consists of the shipboard equipment and small electronic telecommunications units, called transponders, installed at intervals along the shore. The transponders are almost exact duplicates of those developed for manned space travel. They are similar to those used in the United States for precision tracking of the space vehicle immediately after launch.

The transponders, which cost about \$7,500 each, weigh only three or four pounds and can easily be fixed to existing structures such as church steeples or chimney stacks. These shore-based electronic beacons send signals to the shipboard equipment which indicate exactly how far the ship is from the shore and what its position is in the channel. These signals are received aboard ship by an electronic unit about the size of an overnight suitcase. Another electronic unit translates the signals into numerical indications of the ship's distance from the transponder sending signals.

At the same time the electronic information is fed through the system's computer into the graphic display and converted into the light indicator which tells the ship's pilot exactly where the ship is in the channel and whether or not the ship is on a course that could take it out of the channel. Still another numerical readout pinpoints

the ship's position in relation to the co-ordinates on the navigation chart.

The computer guards against minor fluctuations in the readings by computing the average of each five transponder signals. It ensures accuracy further by being programmed to pass on a reading only when 16 consecutive averages so computed are in agreement.

William O'Malley is highly impressed with the system, which he considers the most significant development in navigation since radar. In the St. Lawrence Ship Channel, he says, vessels are inoperative as much as 20 per cent of the time because of weather. This means, in winter, that icebreakers frequently are unable to operate while ice may be piling up and channel obstructions develop unchecked. With the help of the new system, *CCGS Norman McLeod Rogers* this winter will be able to work regardless of weather.

The system also will be used by sounding vessels for positioning obstacles in the ship channel.

"We carry out a year-round survey of the channel with sounding ships, but it is often difficult to pinpoint obstacles for the dredgers," he said. "Rivers can carry down silt to build up sandbars, ice can drop boulders that may weigh as much as 40 tons, while others may be hauled up from



**ADVANCED FIRST AID**—Four Ministry of Transport employees at the Ministry hangar at Ottawa International Airport have been honoured with the presentation of the St. John Ambulance Advanced First Aid Certificate. They are the first in Canada to receive this award. From left are: Clifford A. Stevenson, welder; John F. Monk, aircraft groomer; Murray A. Brunette, aircraft maintenance engineer and First Aid Instructor at the airport; John Parry, aircraft maintenance engineer.

**EXPERTS EN SECOURISME**—Quatre employés du ministère des Transports à l'Aéroport international d'Ottawa ont reçu récemment leur certificat de secourisme avancé de l'Ambulance St-Jean. Premiers canadiens à se mériter un tel honneur, ce sont de gauche à droite: Clifford A. Stevenson, soudeur; John F. Monk, nettoyeur d'aéronefs; Murray A. Brunette, mécanicien d'entretien d'aéronef et instructeur en secourisme; John Parry, mécanicien d'entretien d'aéronef.

the bed of the river. We have to keep a constant check on the channel bed and until now it has been extremely difficult to fix positions for the dredgers."

Mr. O'Malley says that Canada is the forerunner in the use of this system, which was developed by Motorola Inc.

Three more icebreakers will be fitted with the equipment next year, he says, and ultimately about 30 beacons will be set up along the river. They will be powered directly from regular hydro lines but will have reserve battery power to keep them going for at least two days in the event of power failure.

Total cost of the entire shore system is estimated at \$750,000. Value of gear on each equipped ship is about \$120,000. The result will be a distinct saving of money, as Mr. O'Malley sees it, for it will enable ships to work in rain, in snow, and at night, thus saving on the number of ships required for the work.



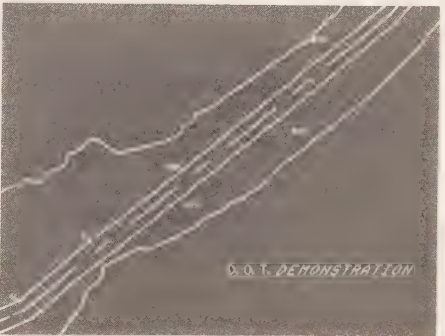
Captain Jean-Paul Michaud, master of CCGS *Ernest Lapointe*, examines part of navigation equipment which gives numerical readings on distance of ship from shore-based transponders.

Le capitaine Jean-Paul Michaud, commandant du n.g.c.c. *Ernest Lapointe*, examine une des pièces du système électronique qui permet de connaître en chiffres la distance séparant le navire du répondeur qui émet les signaux depuis la rive.



William O'Malley, Chief, St. Lawrence Ship Channel, describes the system with the aid of a wall chart.

M. William O'Malley, ingénieur en chef au Chenal maritime du St-Laurent, explique à l'aide d'un graphique mural le nouveau système de repérage et de navigation sans visibilité



This computer-drawn chart of a section of the St. Lawrence river shows both shorelines, the edges of the ship channel, the centre line of the channel, and designated marker buoys. It is shown on a television screen, where the position of the ship is indicated by a moving point of light.

Ce diagramme portant sur une région précise du fleuve St-Laurent nous montre les deux rives, le chenal principal, le centre du chenal et l'emplacement des bouées numérotées. Apparaissant sur un écran, il nous indique ainsi la position exacte du navire grâce à un point lumineux qui se déplace selon la marche du navire





THAT'S A GOOD ONE—Speaking at his presentation dinner in Winnipeg is W. E. Fenn (right). Also enjoying the joke are Mrs. Fenn and D. M. Robertson, Regional Meteorologist.

## W. E. Fenn

Mr. and Mrs. W. E. Fenn were honoured at a dinner held in the Reserve Officers Mess, Canadian Forces Base, Winnipeg, to mark the retirement of Mr. Fenn from the position of Regional Director, Air Services, Central Region.

Approximately 250 people attended the dinner. Among those who attended and spoke were Dr. T. G. How (DDA), H. J. Williamson (DTE) and D. C. Archibald (Chief, Basic Weather, Met. HQ). D. M. Robertson, Regional Meteorologist was master of ceremonies, and Len Klein (Civil Aviation Branch) made the presentation on behalf of Mr. Fenn's fellow workers.

Mr. Fenn is one of the few who participated in the growth of Air Services almost from its inception. He joined the Department as an Electronics Engineer on April 8, 1937, his first assignment being the installation of communication equipment for the first trans-Atlantic flying boat service. On December 13, 1938, he reported to Winnipeg as District Radio Aviation Engineer, in which position he continued, with the exception of one year at Ottawa as Executive Assistant to the Director General, Air Services, until August 1, 1956, when he was promoted to Regional Director.



## David P. Glen

A testimonial dinner in honour of David P. Glen, former Regional Director of Air Services, Toronto, was held in the Oak Room of the Toronto Union Station. The gathering of close to 250 people was comprised of many of his former working associates, both within and outside the department, as well as friends and members of his immediate family.

Forty-three years ago, Mr. Glen joined Western Canada Airways as an Aircraft Engineer. He had attained the rank of senior Captain on leaving their employ 12 years later. In July 1943, he joined the Ministry of Transport (then Department of Transport) as Assistant Inspector of Civil Aviation. Subsequent positions held by him included Inspector of Aviation, District Superintendent of Airways, Regional Controller for Civil Aviation and prior to his retirement, Regional Director of Air Services.

Evidence of Mr. Glen's popularity was reflected not only in the large attendance at the dinner, but in the warmth and sincerity with which the many gifts were presented to him.

Master of ceremonies for the evening was H. M. Wilson, Deputy Regional Director of Air Services.



LENGTHY SERVICE HONOURED—To mark his retirement after 42 years' service, Fred J. Monaghan, right, Employee Benefits in Personnel Branch, receives his certificate from C. M. Whitticar, Directory of Classification and Staff Services. The presentation was made at a reception attended by Mr. Monaghan's many friends and working associates.

UNE CARRIERE BIEN REMPLIE—A l'occasion de sa retraite après 42 années de service, M. Fred J. Monaghan de la Direction du personnel, Section des avantages sociaux, (à droite sur la photo) reçoit son certificat des mains de M. C. M. Whitticar, Directeur de la classification et des Services du personnel. Le certificat fut délivré à M. Monaghan au cours d'une réception donnée en son honneur et à laquelle assistaient ses nombreux collègues et amis.

## Murray N. Monsinger

After serving with the Meteorological Service for more than 35 years, Murray N. Monsinger retired earlier this year.

Born in Lincoln County, Ontario, Mr. Monsinger attended the University of Toronto, where he obtained his B.A. in mathematics and physics and his M.A. in meteorology. He was a member of the first graduating class in meteorology from the University of Toronto in 1934.

Mr. Monsinger's first permanent assignment made him responsible for the Toronto meteorological observations and all the records and statistics for the City Weather Office. Subsequently he made many trips establishing and inspecting weather observing stations throughout Canada.

# Patterson Medal awarded to Quebec scientist

The annual meeting of the Canadian Meteorological Society in Winnipeg, provided the setting for the presentation of the Patterson Medal for 1969 to Dr. G. Oscar Villeneuve, Director of the Quebec Meteorological Service. The presentation was made by C. C. Boughner, Acting Director of the Canadian Meteorological Service.

The Patterson Medal is awarded annually to the resident of Canada, who, in the opinion of the selection committee, has rendered distinguished service to meteorology, either over a period of time or through a recent outstanding achievement.

In outlining the citation which accompanied the award, Mr. Boughner made particular reference to Dr. Villeneuve's broad interest in advancing the science of meteorology rather than limiting his activi-

ties to the development of the Quebec Meteorological Service. Dr. Villeneuve's organization was noted for the excellent working arrangement that had developed between itself and the Canadian Meteorological Service.

Dr. Villeneuve began his career in 1938 as a forest engineer with the «Bureau de Météorologie ministère des Terres et Forêts du Québec». After postgraduate studies at New York and Yale Universities, in 1944 he was appointed Director of the Bureau. He was the first professional meteorologist to carry out studies on forest meteorology in Quebec; he also made other analyses of forest fire seasons as related to meteorological conditions. Recognizing the importance of meteorology in forest protection, Dr. Villeneuve was responsible for the es-



**DISTINGUISHED SERVICE**—Dr. G. O. Villeneuve, left, receives the Patterson Medal from C. C. Boughner, Acting Director of the Canadian Meteorological Service.

tablishment of a greatly expanded meteorological station network in the province.

Dr. Villeneuve has taught climatology and meteorology at Laval University since 1947. His French textbook has contributed greatly to the promotion of meteorological science at the university level. Dr. Villeneuve has also published more than 125 scientific papers and articles.

## retirements

## à la retraite



### K. C. (Kim) Rathbone

A recent retirement from the Ministry was K. C. (Kim) Rathbone, Regional Land Surveyor, Vancouver Regional Office.

Mr. Rathbone was born, educated and served his articles as Land Surveyor and Civil Engineer in New Zealand. He came

to Canada as an immigrant in April 1929 and continued working at land surveying and engineering. During World War Two he was resident engineer, building and locating airports for the Department of Transport in British Columbia. After the war he was an engineer for a logging company for the Yukon Consolidated Gold Corporation in the Yukon Territory.

In April 1947 he obtained his British Columbia Land Surveyor's Certificate and went into private practice. In 1950 he applied for and accepted the position as Regional Surveyor for the D.O.T. Real Estate Regional Office in Edmonton. His region covered British Columbia, Alberta, Saskatchewan and Yukon Territories and part of the Northwest Territories. He obtained his Alberta Land Surveyor Certificates in 1950 and 1953, respectively.

In 1966 the region was divided and he was transferred to the newly-formed Vancouver Region as Regional Land Surveyor covering British Columbia, where he remained until his retirement.

### Other retirements

Gerard Belanger, Kapuskasing, Ont.—19 years;

George Halliday, Ottawa—18 years;

Harold Finkle, Willowdale, Ont.—34 years;

J. A. Michaud, CCGS D'Iberville—13 years;

Keith R. Algee, Halifax Co., N.S.—10 years;

William T. Yetman, Gander, Nfld.—27 years;

H. C. Pearce, Victoria, B.C.—17 years;

J. W. Braithwaite, Victoria, B.C.—13 years;

Leslie T. Georgey, Thunder Bay, Ont.—27 years;

Everton R. Kitchener, Rexdale, Ont.—21 years;

Carolyn C. Redding, Saint John, N.B.—17 years;

Gerald A. Murphy, Saint John, N.B.—20 years;

William S. Smith, Herring Cove, N.S.—16 years;

Oliver Lecuyer, Ottawa—30 years;

A. T. Durnford, Dartmouth, N.S.—13 years;





**LIBRARY SUGGESTION**—For his suggestion of an Inter-Library Wrapper for use in the Ministry of Transport library, Arthur Huot, a member of the library sta., has been awarded \$160. It was considered there would be a saving of from five to six man hours each week and a saving in the replacement of lost books with the use of these wrappers. Here Mr. Huot is seen with one of the wrappers around a volume of an 1859 Canada Gazette, one of the oldest books in the library.

**UNE LIBRAIRIE SUGGÈRE**—M. Arthur Huot, membre du personnel de la bibliothèque du ministère des Transports, s'est mérité une prime de \$160 pour avoir mis au point une bande de rappel pour les prêts entre bibliothèques. Cette bande de rappel permettra d'économiser de cinq à six hommes/heures chaque semaine en plus de faciliter le remplacement des volumes perdus. Nous voyons ici M. Huot tenant l'un des plus vieux volumes de la bibliothèque, un exemplaire de la *Gazette du Canada* de 1859 pourvu d'une bande de rappel.

## Be always on the look-out for economies and improvements

In the course of your day's work have you ever said: "This is a stupid way to do it." If so, what did you do about it? Did you send in a suggestion outlining an improved work procedure, or did you just leave it to the other fellow to do something about it?

If you have an idea, write it down and discuss it with your supervisor. Don't wait for that REALLY BIG IDEA. Be always on the look-out for economies and improvements—one day you might be another Edison. Edison once said that genius is one per cent inspiration and ninety-nine per cent perspiration, and he obviously made use of that one per cent.

Edison also said: "I never did anything worth doing by accident, nor did any of my inventions come by accident—they came by work."

Your ideas will contribute significantly to the efficiency of operations in the Ministry and may result in a monetary recognition if you use the Suggestion Award Program.

Here are some recent suggestion award winners.

K. G. Nichol, Winnipeg—\$600 award—Work simplification program.

Roger Parent, Ottawa—\$60 award—Printing of B.F. Charge Card on both sides;

F. F. Deacon, Edmonton—\$80 award—Modification to turret setting handle on airport foam trucks;

J. H. C. Devost, Montreal—\$50 award—Change in temperature control where transistorized equipment is in operation;

J. J. D. Green, Killaloe, Ont.—\$10 award—Modification in rainfall gauge;

B. L. Brintnell, Vancouver—\$40 award—American weather identifiers listing for alternate airports;

R. J. Robinson, Ottawa—\$85 award—Modification in voltage regulator adjustment on Bell 206A helicopter;

A. B. Gormley, Manotick, Ont.—\$40 award—Modification to Bell helicopter rotor balancing tool;

E. J. Corbett, Dartmouth, N.S.—\$40 award—Velcro-tape fasteners on fire fighting jackets;

Cyril Pauls, Campbellton, Nfld.—\$80 award—Modification to Northern Electric 1 kw transmitters;

Jean-Paul Prevost, Hull, P.Q.—\$120 award—Economical runway lighting;

M. G. Arthurs, Coxheath, C.B., N.S.—\$40 award—Improved instrument landing system;

W. E. Power, Maniwaki, P.Q.—\$15 award—Modification to automatic weather station;

R. A. Cook, Winnipeg—\$10 award—Amendment to flight plan form;

Richard Page, Port Hardy, B.C.—\$15 award—Voltage reduction on Plessey PR51C receivers;

George W. Elliott, Stonewall, Man.—\$150 award—Cab roof directional signal lights on snow plow trucks;

Robert E. Schwab, Port Hardy, B.C.—\$30 award—Modification to electronic equipment door hinges;

Denis H. Bodkin, Abbotsford, B.C.—\$10 award—Discontinue supplying linesmen's belts to stations;

Bruce H. Waine, Alert Bay, B.C.—\$30 award—Amendment to new editions of telecommunications manuals.

# Abbotsford Airshow

In this picture can be seen aircraft lining up for take-off. Blue Angels of the U.S. Navy, a prominent part of the show, are indicated by arrow on main runway after their act.



The Abbotsford Airshow in August attracted a record attendance of 130,000. Nine years ago when the airshow was first held, only 1,400 passed through the gates.

It was reported not only the biggest, most successful and smoothest of the Abbotsford Airshows, but the weather was tailored as if by special order.

Transport Minister Don Jamieson, who opened the show, praised the airshow committee for their efforts in making it the largest airshow in North America.

Close to 800 civilian aircraft flew into Abbotsford for the show and the Ministry of Transport played a vital role in the smooth running of the operation. Although the Airshow Society plans, organizes and finances the show, the Ministry is involved in air regulations, airways, air traffic control, meteorology, telecom and last, but not least, airport management and maintenance.

Each of the Ministry sections are involved months before the actual show in

their own planning and consulting with airshow officials.

Abbotsford is particularly proud of its flying show. Once again it ran with the split-second precision each day that has become the outstanding characteristic of Abbotsford.



**PEOPLE, PEOPLE EVERYWHERE**—This picture shows only a section of the record-breaking crowd attending the airshow at Abbotsford.



# Transport ALBUM des Transports



Seen in this picture are centre controllers, or Instrument Flight Rules controllers at Montreal Centre, Montreal International Airport. These controllers direct the movement of aircraft flying "on instruments" en route, arriving and departing from major airports. Usually located in a room below the airport tower, these men are aided by radar and other electronic equipment of various types, with which they can determine the distance and direction of movement of the aircraft they can see as "blips" on their radar screens. These aircraft are too distant to be under the control of the tower controllers. Generally speaking, the controller is ensuring the separation and movement of aircraft under Instrument Flight Rules.

On voit dans cette photo les contrôleurs régionaux des vols aux instruments au Centre de Montréal, aéroport international de Montréal. Ces contrôleurs dirigent le mouvement des aéronefs qui volent aux instruments à destination ou en provenance des aéroports principaux. Ces hommes, qui occupent généralement une salle située au-dessous de la tour de contrôle, déterminent, grâce au radar et à d'autres instruments électroniques, la distance et la direction des aéronefs qui paraissent comme de simples «tops» d'écho sur l'écran de radar. Ces aéronefs sont trop éloignés pour pouvoir être pris en charge par les contrôleurs situés dans la tour. En général, ces contrôleurs assurant l'espacement et le mouvement des aéronefs en vertu des règles régissant le vol aux instruments.







**BINDING SECT.** MAR 16 1982



